CURRICULUM VITAE Vafi Salmasi M.D. April 2019

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointment

Pain Medicine Instructor Department of Anesthesiology, Perioperative and Pain Medicine Masters Student in Epidemiology and Clinical Research Stanford University School of Medicine Palo Alto, CA

Personal Data

Work Address: 1070 Arastradero Rd. Suite 200 Palo Alto, CA 94305 Phone: 650-725-0246 Email: vsalmasi@stanford.edu

Education and Training

| Education and Trai | ining | |
|---------------------|--|--|
| Feb. 1997-Oct. 2004 | Medical Doctorate | Tehran University of Medical Sciences Tehran Iran |
| Jan. 2008-Oct. 2009 | Neurosurgery Residency | Neurological Surgery Residency Training Program Firoozgar Hospital Iran University of Medical Sciences Tehran Iran |
| Oct. 2009-Mar. 2011 | Postdoctoral Research Fellowship | Johns Hopkins University School of Medicine Department of Neurosurgery Baltimore, MD USA |
| Mar.2011-Jan. 2012 | Postdoctoral Clinical Research Fellowship | Cleveland Clinic Department of Outcomes Research Anesthesiology Institute Cleveland, OH USA |
| Feb. 2012-Jun. 2012 | Anesthesiology Pre-residency | Cleveland Clinic Anesthesiology Institute Cleveland, OH USA |
| Jul. 2012-Jun. 2016 | Anesthesiology Residency | Cleveland Clinic Anesthesiology Institute Cleveland, OH USA |
| Aug. 2016-Jul. 2017 | Pain Medicine Fellowship | Stanford University Department of Anesthesiology and Pain Medicine Palo Alto, CA USA |
| Aug. 2017-Sep. 2018 | Pain Medicine Postdoctoral Research Fellowship | Stanford University Department of Anesthesiology and Pain Medicine Palo Alto, CA USA |
| Sep. 2017-Mar. 2019 | Master's Degree In Clinical Research and Epidemiology | Stanford University School of Medicine Palo Alto, CA USA |

Funding

| Aug. 2017-Jul. 2018 | T32 postdoctoral research fellow on a training grant by National Institute of Health |
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| Aug. 2018-Jul. 2020 | Mentored Research Training Grant by American Society of Anesthesiology (ASA) Foundation for Anesthesia Education and Research (FAER) |

Licensure and Board Certification ECFMG Certified since 10/28/2010

| Certified since 10/28/2010 | |
|----------------------------|-------------------------------|
| Step 1 | First Pass in Sep. 2009 (255) |
| Step 2 CK | First Pass in Nov. 2006 (240) |
| Step 2 CS | First Pass in Mar. 2010 |
| Step 3 | First Pass in Nov. 2011 (211) |
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Licensed for medical practice in state of Ohio since 2015

Licensed for medical practice in state of California since 2016

American Board of Anesthesiology Diplomate since 2017

American Board of Anesthesiology Pain Medicine Board Certified since 2017

Languages

Persian (Native Language) English (Proficient in all 4 skills) French (Basic knowledge of reading, listening and speaking) Arabic (Basic knowledge of reading, and writing)

Professional Experience

| Medical Oct. 2004-Dec. 2005 | Primary Care Physician and Family Physician Iran Ministry of Health; Booshehr University of Medical Sciences Booshehr, Iran |
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| Dec. 2005-Nov. 2006 | Emergency Physician Oil Industry Engineering Company (OIEC, the main contractor of phases 9 & 10 South Pars Gas Field Development) Assaluyeh, Iran |
| Jan. 2007-Sep. 2009 | Consulting Physician (health consultation for foreign employees of multiple different companies and embassies based in Iran including British Embassy, Embassy of the Netherlands, Statoil, Shell, OMV, etc) Medcare Iran Tehran, Iran |
| Oct. 2008-Nov. 2008 | Emergency Physician of the Gas Field Platform SPD8 Statoil Company (under supervision of Medcare Iran) Assaluyeh, Iran |

| Aug. 2017-Sep. 2018 | Clinical Instructor Stanford University School of Medicine Department of Anesthesiology, Perioperative and Pain Medicine Palo Alto, CA |
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| Sep. 2018-Present | Pain Medicine Instructor Stanford University School of Medicine Department of Anesthesiology, Perioperative and Pain Medicine Palo Alto, CA |

Research Activities

M.S. Thesis Title:

Characterization of Patients with Chronic Pain who Report Use of Opioids and/or Cannabinoids (<u>https://purl.stanford.edu/fs165hz2574</u>)

Research Experience

| Mar. 2004-Sep. 2009 | Translator, English Editor, and Researcher Pajouheshyar Pars Teb Company Tehran, Iran |
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| Apr. 2007-Sep. 2007 | Translator, Researcher, and Designer of Studies Cardiovascular Surgery and Heart Transplant Research Center Shariati Hospital Tehran University of Medical Sciences Tehran, Iran |
| Jul. 2007-Jan. 2008 | Local Project Administrator Bayer Schering Pharma Iran Tehran, Iran |
| Oct. 2009-Mar. 2011 | Postdoctoral Research Fellow Johns Hopkins University School of Medicine Department of Neurosurgery Baltimore, MD |
| Mar. 2011-Jan. 2012 | Postdoctoral Clinical Research Fellow Cleveland Clinic Department of Outcomes Research Anesthesiology Institute Cleveland, OH |
| May 2013-Jun. 2016 | Residency Research Coordinator Cleveland Clinic Department of Outcomes Research Anesthesiology Institute Cleveland, OH |
| Aug. 2017-Current | Pain Medicine Postdoctoral Research Fellowship Stanford University School of Medicine Department of Anesthesiology and Pain Medicine Palo Alto, CA |

Peer Reviewed Publications

- 1. **Salmasi V**, Blitz AM, Ishii M, Gallia GL. Expanded endonasal endoscopic approach for resection of a large skull base aneurysmal bone cyst in a pediatric patient with extensive cranial fibrous dysplasia. Childs Nerv Syst. 27(4):649-56. Epub 2010 Dec 4
- Gallia GL, Reh DD, Salmasi V, Blitz AM, Koch WM, Ishii M. Endonasal Endoscopic Resection of Esthesioneuroblastoma: The Johns Hopkins Hospital Experience and Review of the Literature. Neurosurg Rev. 34(4):465-75. Epub 2011 Jun 8.
- Salmasi V, Blitz A, Argani P, Reh DD, Gallia GL. Expanded Endonasal Endoscopic Approach for Resection of a Skull Base Low Grade Smooth Muscle Neoplasm in a Pediatric Patient. Childs Nerv Syst. 28:151-158. Epub 2011 Oct 29
- 4. Siu I, **Salmasi** V, Binder Z, Orr B, Zhao Q, Gallia GL. Establishment and Characterization of a Primary Human Chordoma Xenograft Model. JNS. 116(4):801-809. Epub 2012 Jan 27
- Turan A, Shao D, Salmasi V, Honar H, Atim A, Dalton JE, Saager L, Sessler DI. Chemotherapy within 30 days before surgery does not augment postoperative mortality and morbidity. Can J Anesth. 59(8):758-765. Epub 2012 May 26
- Xia X, Ramanathan M, Orr BA, Salmasi V, Salvatori R, Reh DD, Gallia GL. Expanded Endonasal Endoscopic Approach for Resection of a Growth Hormone Secreting Pituitary Macroadenoma Coexistent with a Cavernous Carotid Artery Aneurysm. J Clin Neurosci. 19:1437-1441. Epub 2012 Jul 25
- Bettegowda C, Agrawal N, Jiao Y, Wang Y, Wood LD, Rodriguez FJ, Hruban RH, Gallia GL, Binder ZA, Riggins CJ, Salmasi V, Riggins GJ, Reitman ZJ, Rasheed A, Keir S, Shinjo S, Marie S, McLendon R, Jallo G, Vogelstein B, Bigner D, Yan H, Kinzler KW, Papadopoulos N: Exomic Sequencing of Four Rare Central Nervous System Tumor Types. Oncotarget. 2013 Apr;4(4):572-83 Epub 2013 Apr 6
- Baia GS, Caballero OL, Ho JSY, Qi Z, Binder ZA, Salmasi V, Gallia GL, Duinones-Hinojosa A, Olivi A, Brem H, Burger P, Strausberg RL, Simpson AJG, Eberhart CG, Riggins GJ. NY-ESO-1 Expression in Meningioma Suggests a Rationale for New Immunotherapeutic Approaches. Cancer Immunology Research. 2013 Nov;1(5):296-302. Epub 2013 Aug 5
- **9.** Borodovsky A, **Salmasi V**, Turcan S, Baia GS, Eberhart CG, Weingart JD, Gallia GL, Baylin, SB, Chan TA, Riggins GJ. 5-azacytidine reduces methylation, promotes differentiation and induces tumor regression in a patient-derived *IDH1* mutant glioma xenograft. **Oncotarget.** 2013 Oct; 4 (10): 1737-47
- Salmasi V, Schiavi A, Binder ZA, Ruzevick J, Orr BA, Burger PC, Ball, DW, Koch WM, Ishii M, Gallia GL. Intraoperative hypertensive crisis due to a catecholamine-secreting esthesioneuroblastoma. Head & Neck. 2014 Oct 28
- Devereuax PJ. & POISE-2 Investigators. Aspirin in patients undergoing noncardiac surgery. NEJM. 2014 Apr 17;370(16):1494-503. Epub 2014 Mar 31
- Devereuax PJ. & POISE-2 Investigators. Clonidine in patients undergoing noncardiac surgery. NEJM. 2014 Apr 17;370(16):1504-13. Epub 2014 Mar 31
- **13.** Salmasi V, Chaiban G, Eissa H, Tolba R, Lirette L, Guirguis MN. Application of Cooled radiofrequency ablation in management of chronic pain. Techniques in Regional Anesthesia and Pain Management. 2014 Oct;18(4):137-44
- 14. Garg AX, Kurz A, Sessler DI & POISE-2 Investigators. Perioperative aspirin and clonidine and risk of acute kidney injury: a randomized clinical trial. **JAMA**. 2014 Dec 3;312(21):2254-64
- 15. Sun Z, Honar H, Sessler DI, Dalton JE, Yang D, Panjasawatwong K, Deroee AF, **Salmasi V**, Saager L, Kurz A. Intraoperative core temperature patterns, transfusion requirement, and hospital duration in patients with forced air. **Anesthesiology.** 2015 Feb;122(2):276-285
- Elsharkawy H, Salmasi V, Turan A, Abdelsayed A. Identification of the Location of Peripheral Nerve Catheters during Peripheral Nerve Blocks using Pumping Technique. Journal of Clinical Anesthesia. 2015 Jun;27(4):325-330
- Binder ZA, Wilson KM, Salmasi V, Orr BA, Eberhart CG, Siu IM, Lim M, Weingart JD, Quinones-Hinojosa A, Bettegowda C, Kassam AB, Olivi A, Brem H, Riggins GJ, Gallia GL. Establishment and Biological Characteristics of a Panel of Glioblastome Multiforme (GBM) and GBM Variant Oncosphere Cell Lines. PLoS One. 2016 Mar 30;11(3):e0150271

- Turan A, Babazade R, Kurz A, Devereaux PJ, Zimmerman NM, Hutcherson MT, Naylor AJ, Ali Sakr Esa W, Parlow J, Gilron I, Honar H, Salmasi V, Sessler DI. Clonidine Does Not Reduce Pain or Opioid Consumption after Noncardiac Surgery. Anesthesia Analgesia. 2016 Sep;123(3):749-57
- Elsharkawy H, Salmasi V, Mounir-Soliman L, Ali Sakr Esa W, Blanco R. Single Shot Ultrasound-guided Quadratus Lumborum Block with Liposomal Bupivacaine: A Case Report and Description of the Technique. Journal of Anesthesia and Critical Care. 2016 Nov 6(1):00214
- 20. Salmasi V, Maheshwari K, Yang D, Mascha EJ, Singh A, Sessler DI, Kurz A. The Relationship Between Intraoperative Hypotension, Defined By Reduction from Baseline or Absolute Thresholds, and Acute Kidney and Myocardial Injury after Non-cardiac Surgery; A Retrospective Cohort Analysis. Anesthesiology. 2017 Jan;126(1):47-65 (This publication is featured in January 2017 Podcast of Anesthesiology)
- 21. Gallia GL, Zhang M, Ning Y, Haffner MC, Batista D, Binder ZA, Bishop JA, Hann CL, Hruban RH, Ishii M, Klein AP, Reh DD, Rooper LM, Salmasi V, Tamargo RJ, Wang Q, Williamson T, Zhao T, Zou Y, Meeker AK, Agrawal N, Vogelstein B, Kinzler KW, Papadopoulos N, Bettegowda C. Genomic Analysis Identifies Frequent Deletions of Dystrophin in Olfactory Neuroblastoma. Nature Communications. 2018 Dec 21;9(1):5410

Presentations

- Sarzaeem MR, Jebeli M, Mandegar MH, Eghtesadi-Araghi P, Salmasi V, Darezereshki A. Delayed Sternal Closure in Patients Undergoing Cardiac Surgery. The World Society on Cardio-Thoracic Surgeons 18th World Congress, Kos, Greece, May 2008
- Binder ZA, Salmasi V, Lim M, Weingart J, Brem H, Olivi A, Riggins GJ, Gallia GL. Establishment of GBM suspension cell lines. Society for Neuro-Oncology 15th Annual Scientific Meeting, Montreal, Canada, Nov. 2010
- 3. Salmasi V, Pradilla G, Reh DD, Gallia GL. Expanded Endonasal Endoscopic Approach for Resection of a Cavernous Sinus Teratoma. 21st North American Skull Base Society Annual Meeting, Scottsdale, AZ, Feb. 2011
- Gallia GL, Reh DD, Salmasi V, Koch WM, Blitz AM, Ishii M. Endonasal Endoscopic Resection of Esthesioneuroblastoma: The Johns Hopkins Hospital Experience and Review of the Literature. 21st North American Skull Base Society Annual Meeting, Scottsdale, AZ, Feb. 2011
- Salmasi V, You J, Saager L, Sessler DI, Kurz A, Turan A. Angiotensin Converting Enzyme Inhibitors Do not Alter Intraoperative Hemodynamic Characteristics; Cleveland Clinic Experience. 2011 American Society of Anesthesiologists Annual Meeting, Chicago, IL, Oct. 2011 (Also presented at Cleveland Clinic Research Day on November 8, 2011 and won the second prize for the Bumpus Award for the best student/fellow abstract and presented at 2012 Midwest Anesthesia Residents' Conference, Chicago, USA, Mar. 2012)
- 6. Atim A, You j, Saager L, Bashour A, Kurz A, Sessler DI, Salmasi V, Turan A. Effect of Dexmedetomidine on Atrial Arrhythmias after Cardiac Surgery. Cleveland Clinic Research Day, Cleveland, OH, Nov. 2011
- 7. Salmasi V, Schiavi Adam S, Orr BA, Ball D, Binder ZA, Ishii M, Gallia GL. Intraoperative Hypertensive Crisis due to a Catecholamine-secreting Esthesioneuroblastoma. 22nd North American Skull Base Society Annual Meeting, Las Vegas, NV, Feb. 2012
- Salmasi V, Xia X, Ishii M, Reh DD, Gallia GL. Expanded Endonasal Endoscopic Approaches to Skull Base Lesions in Pediatric Patients. 22nd North American Skull Base Society Annual Meeting, Las Vegas, NV, Feb. 2012
- Salmasi V, Tran M, Stapelfeldt WH. Successful Anesthetic Management of a Patient with a Metastatic Catecholamine Secreting Paraganglioma. 2013 Midwest Anesthesia Residents' Conference, Kansas City, MO, Apr. 2013
- Salmasi V, Arora L, Elsharkawy H. Identification of the Location of Peripheral Nerve Catheters during Peripheral Nerve Blocks using Pumping Technique. 38th Annual Regional Anesthesia and Acute Pain Medicine Meeting, Boston, MA, May 2013

- 11. Salmasi V, Elsharkawy H. Identification of the Location of Peripheral Nerve Catheters during Peripheral Nerve Blocks using M-Mode. 2014 American Society of Anesthesiologists Annual Meeting, New Orleans, LA, Oct. 2014
- Salmasi V, Rosenquist R. Rare Presentation of Facet Joint Disease with Upper Abdominal Pain. 2014 American Society of Anesthesiologists Annual Meeting, New Orleans, LA, Oct. 2014
- Salmasi V, Rosenquist R. Rare Presentation of Thoracic Syringomyelia with Abdominal Pain. 2014 American Society of Anesthesiologists Annual Meeting, New Orleans, LA, Oct. 2014
- 14. Salmasi V, Jerabek J. Acute Increase of Intracranial Pressure in Post-Anesthesia Care Unit after Elective Frontal Lobectomy. 2014 American Society of Anesthesiologists Annual Meeting, New Orleans, LA, Oct. 2014
- 15. Salmasi V, Vrooman B. Novel Application of Spinal Cord Stimulation in Persistent Post-Mastectomy Pain. 14th Annual Pain Medicine Meeting of American Society of Regional Anesthesia and Pain Medicine, Miami, FL, Nov. 2015 (Also presented at 2016 Midwest Anesthesia Residents' Conference (MARC), Minneapolis, MN, Apr. 2016 and won the first prize)
- 16. Salmasi V, Maheshwari K, Yang D, Mascha EJ, Singh A, Sessler DI, Kurz A. The Relationship Between Intraoperative Hypotension, Defined By Reduction from Baseline or Absolute Thresholds, and Myocardial Injury after Non-cardiac Surgery; A Retrospective Cohort Analysis. 63rd Annual Meeting of Association of University Anesthesiologists, San Francisco, CA, May 2016 (Also presented at 2016 Midwest Anesthesia Residents' Conference (MARC), Minneapolis, MN, Apr. 2016 and won the first prize; 2016 American Society of Anesthesiologists Annual Meeting, Chicago, IL, Oct. 2016 and won second place winner in Residents' Research Essay Contest)
- Salmasi V, You J, Mascha EJ, Grille, M, Cheng J. Preprocedure Temperature Does not Predict the Outcome of Sympathetic Blocks. 15th Annual Pain Meeting of American Society of Regional Anesthesia and Pain Medicine, San Diego, CA, Nov. 2016.
- Salmasi V, You J, Mascha EJ, Grille, M, Cheng J. Effectiveness of Sympathetic Block is not Associated with Increased Success Rate of Spinal Cord Stimulation. American Academy of Pain Medicine 33rd Annual Meeting, Orlando FL, Mar. 2017
- Salmasi V, Prasad R, Kao, MC, Leong M. Application of Interdisciplinary Team Conference for Spinal Cord Stimulation Candidates. North American Neuromodulation Society 21st Annual Meeting, Las Vegas NV, Jan. 2018
- 20. Salmasi V, Prasad R, Kao, MC, Ottestad E, Coleman S, Leong M. Application of Interdisciplinary Team Conference for Spinal Cord Stimulation Candidates: Two-year Update. North American Neuromodulation Society 22st Annual Meeting, Las Vegas NV, Jan. 2019

Book Chapters

- 1. Christian S, Salmasi V, Leong MS. Stimulation methods and device choices: Dorsal root ganglion stimulator, spinal cord stimulator, peripheral nerve stimulator, In Deer (Ed) Deer's Treatment of Pain
- 2. Coleman S, Salmasi V, Leong MS. Wound closure and surgical healing, In Deer (Ed) Deer's Treatment of Pain

Invited Lectures

- 1. Natividad Hospital, Invited speaker at grand rounds for Department of Physical Medicine and Rehabilitation, Neurodmodulation: Basics and available technology, September 2017
- 2. American Society of Anesthesiologists (ASA) annual meeting, Moderator for Medically Challenging Cases session, October 2018
- 3. California Society of Interventional Pain Physicians (CASIPP) annual meeting, Innovations in radiofrequency, November 2018

- 4. American Academy of Pain Medicine (AAPM) annual meeting, Presenting cons of cooled radiofrequency ablation, March 2019
- 5. International Anesthesia Research Society (IARS) annual meeting, Pragmatic Clinical Trials, May 2019

Ongoing Research Projects

- 1. Comparative effectiveness of duloxetine and desipramine: a pragmatic randomized trial using point-of-care randomization
- 2. Characterization of patients with chronic pain who report use of opioids and/or cannabinoids
- 3. Validation of CHOIR body map survey
- 4. Comparing long-term effectiveness of high frequency and burst spinal cord stimulation

Professional Organization

| Apr. 2007-Sep. 2007 | Establishing the grounds of Cardiovascular Surgery and Heart Transplant Research Center, Tehran, Iran |
|---------------------|---|
| Jul. 2007-Feb. 2008 | Organizing all clinical studies of Bayer Schering Pharma Company in Iran |
| Oct. 2009-Mar. 2011 | Co-organizing the tumor bank at Neurosurgery Department of Johns Hopkins Medical Institute |
| Mar. 2011-Jan. 2012 | Working as the lead fellow of the international, multi-center clinical trial called POISE-2 (PeriOperative Ischemic Evaluation 2) at Cleveland Clinic |
| May 2013-Jun. 2016 | Residency research Coordinator at the Anesthesiology Residency Program of The Cleveland Clinic |
| Jan. 2017-Aug. 2017 | Chief Fellow at the Pain Medicine Fellowship Program of Stanford Department of Anesthesiology, Perioperative and Pain Medicine |
| Jan. 2017-Present | Established and Organizing Stanford Pain Management Center Neuromodulation Multidisciplinary Team Conference |
| Jan. 2018-Present | Co-chair of education committee for California Society of Interventional Pain Physicians (CASIPP) |
| May 2018 | Co-organized first fellow neuromodulation cadaver course for California Society of Interventional Pain Physicians (CASIPP) |
| Nov. 2018 | Will be co-organizing pre-meeting cadaver course for Annual Meeting of California Society of Interventional Pain Physicians (CASIPP) |

Awards

- Ranked 17th competing with 352,645 applicant in the entrance examination of the universities in 1996 in Iran
- Winner of the second prize of the Bumpus Award for the best student/fellow abstract at Cleveland Clinic Research Day in Nov. 2011, Cleveland, OH
- Winner of the first prize of pharmacology room at Midwest Anesthesia Resident Conference (MARC) in 2012, Chicago, IL
- Recipient of American Pain Society scholarship to attend "Fundamentals of Pain Management: An Interdisciplinary Primer" course and American Pain Society 34th Annual Meeting in May 2015, Palm Springs, CA
- Winner of first prize of general anesthesiology room at Midwest Anesthesia Resident Conference (MARC) in 2016, Minneapolis, MN
- Winner of first prize of pain room at Midwest Anesthesia Resident Conference (MARC) in 2016, Minneapolis, MN
- Recipient of Michael J. deUngria M.D. Residency Award at Cleveland Clinic Anesthesiology Residency Program in May 2016, Cleveland Clinic, Cleveland, OH
- Second place winner in Residents' Research Essay Contest in American Society of Anesthesiology Annual Meeting in October 2016, Chicago, IL
- Awarded Mentored Research Training Grant By American Society of Anesthesiology (ASA) Foundation for Anesthesia Education and Research (FAER) in 2018

Memberships & Other Activities

- Member of Islamic Republic of Iran Medical Council since 2004
- Member of American Society of Anesthesiology since 2011
- Member of American Society of Regional Anesthesia and Pain Medicine since 2012
- Member of American Academy of Pain Medicine since 2016
- Member of North American Neuromodulation Society since 2016
- Member of American Society of Interventional Pain Physicians since 2018
- Performing Peer-Review for Journals of the Field (Neurosurgery, Pain Medicine, PLOS ONE, BMJ)

| Non-Medical | |
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| 1998-2000 | English Language Instructor Simin Educational Institute Tehran, Iran |
| 2000-2003 | English Language Instructor Kish Language Institute Tehran, Iran |
| 2003-2004 | English Language Instructor Bayan-e-Salis Language Institute Tehran, Iran |

Hobbies

- Photography
- Cars (test-driving and reading about them)
- Traveling
- Biking
- Improving my skills in making espresso drinks