

ALEXA LEAN, MD

Board Certified Anesthesiologist. Subspecialty Fellowship in Pain Management with Emphasis on Diagnostic and Therapeutic Interventions as well as Medical Management.

Scope of Practice includes Invasive Surgical Procedures: Implantable Devices (intrathecal pump placement and management) and Neuromodulation (peripheral nerve and spinal cord stimulators), Minimally Invasive Lumbar Decompression (MILD), Intracept, Vertebroplasty, as well as Central and Peripheral Nerve Blocks and Ablation Techniques with Fluoroscopic and Ultrasound Guidance, Botox Pain Protocols, Joint Injections, and more. Motivated to Continue Advancing and Developing Dynamic, Patient-Centered Pain Management Strategies. *References, Case Logs, and Patient Reviews available upon request.*

EMPLOYMENT

OCT 2023- PRESENT ATTENDING PHYSICIAN, UCI DEPARTMENT OF ANESTHESIA AND PAIN MANAGEMENT

Assistant Professor

Director of Acute Pain Service Rotation

Patient Centered Clerkship (PACE) Program Medical School Instructor

JAN 2023- OCT 2023 ATTENDING PHYSICIAN, UCLA DEPARTMENT OF ANESTHESIA

Per Diem Assistant Professor

EDUCATION AND TRAINING

2022- 2023 UNIVERSITY OF CALIFORNIA LOS ANGELES, DEPARTMENT OF ANESTHESIA
Anesthesia Fellowship in Pain Management

2018- 2022 UNIVERSITY OF WASHINGTON, DEPARTMENT OF ANESTHESIA
Anesthesia Resident
Honors in Research, Bonica Scholar Resident Research Program

2014- 2018 THE GEORGE WASHINGTON SCHOOL OF MEDICINE
Doctor of Medicine
Distinction in Research, Gillman Fellow

2009- 2013 UNIVERSITY OF CALIFORNIA SAN DIEGO
B.A. in The Study of World Religions, Magna Cum Laude
Thesis Focused on Daoism and Traditional Chinese Medicine: Science and Religion Developing Synergistically, Awarded Honors with Highest Distinction

HONORS AND AWARDS

BONICA SCHOLAR AWARD, RESIDENT RESEARCH TRACK (2021-2022)

Selected for merit-based, six-month research experience during Clinical Anesthesia Year 3. Worked in The Shin Lin Laboratory, part of the Institute for Stem Cell and Regenerative Medicine, with an interdisciplinary team focused on epigenetic changes and second-generation sequencing methods of cell free DNA.

RESIDENT AMBASSADOR, AMERICAN SOCIETY OF ANESTHESIA (2021-2022)

Led web-based national resident discussions on various current events, the direction of anesthesia, advanced training, quality improvement and resident life.

MEDLINE “WORKS OF HEART NOMINEE” (2020)

Nominated by surgical RN for the annual “Works of Heart” Award, sponsored by Medline. Interviewed for [video](#) and [article](#)

JOSEPH COLLIN'S FOUNDATION SCHOLARSHIP (2017-2018)

Received merit-based award for demonstrated and continued interest in the arts and sciences at The George Washington School of Medicine and Health Sciences.

AMERICAN ASSOCIATION OF ANATOMISTS TRAVEL AWARD (2017)

Selected for funding to present and attend Experimental Biology, Chicago, IL for research "Anatomical Knowledge Retention in Changing Curricula."

THE BEAUMONT SOCIETY GLEW PRIZE AWARD (2015)

Awarded for top scoring abstract "Circulating miRNA Biomarkers in Early Breast Cancer Detection Following Mammography" at George Washington University, Washington, DC.

W. T. GILL RESEARCH FELLOWSHIP AWARD (2015-2016)

Worked in the Dr. Fu Laboratory at George Washington University School of Medicine and attended Peking University First Hospital in Beijing, China, to continue exploring the utilization of microRNA as a potential biomarker.

CLINICAL AND QUALITY IMPROVEMENT PROJECTS

OPIOID CONTRACT REVIEW FOR ONGOING PRESCRIBING (JANUARY 2023)

Working with my co-fellows, medical assistants, and office staff, we recognized patients receiving ongoing opioid management did not recall the components of their signed contract at time of initial prescription. As a team, we implemented new check-in processes specific to patients on opioid medications, including laminated contract copies and questionnaire at each office visit.

ALARIS PUMP PROGRAMING: 2 PROVIDER CHECK (OCTOBER 2020)

Helped create, design, and implement multistep "time out" for management of initiating infusions at Seattle Children's Hospital with a team of attending anesthesiologists. I helped finalize this tool, a project that spanned over 6 years, by attending meetings, protocol trials, and creating the graphic design and document distributed throughout the OR Staff and in the OR, attached to each infusion pump.

"MAYO MAT" (MARCH 2020)

Created, implemented, and coined the "Mayo Mat," a tool I designed for strict isolation cases, without in-room anesthesia carts, during the COVID Pandemic. It continues to be utilized at Seattle Children's Hospital. This mat is placed on a Mayo stand, helping aid anesthesia technicians and providers with a visual checklist, strategic placement of necessary equipment and medication for standardization and safety. Next phase is to adapt the concept for ICU intubations and the difficult airway cart.

COVID-19 AIRWAY MANAGEMENT TEAM (MARCH 2020)

Worked with a team of attending anesthesiologists, anesthesia technicians, and supervising nurses to develop the protocol for intubating patients with unknown status or confirmed COVID-19 infections. My contributions included simulation sessions, feedback sessions, and graphic design of the finalized draping and intubation sequence. The checklist and visual instruction tool was distributed throughout Seattle Children's Hospital and adapted for OR and out-of-OR intubations.

PUBLICATIONS

Interlaminar Cervical Epidural: Step-by-Step Guide. Open Anesthesia. International Anesthesia research society.
<https://www.openanesthesia.org/vodcasts/interlaminar-cervical-epidural-steroid-injection-step-by-step-guide/>

Regional Anesthesia and Pain Medicine, "Spinal Cord Stimulation as a Novel Treatment for Refractory Painful Diabetic Peripheral Neuropathy in a Pediatric Patient." Article submission in review for publication.

Dannemiller Pain Review Course, "Cancer Pain" and "Ethics in Pain Management" Developed, created and editing two lectures on topics of Ethics and Cancer in Pain Management, published and used for nationally and internationally for CME and Board Review, 2025. <https://www.dannemiller.com/activity-details/pain-review-course-2025>

Caudal Block Instructional Video (2020), published on the *Anesthesia Toolbox*. I illustrated the sacral anatomy and made a graphic to emphasize needle placement during caudal epidural administration, <https://www.youtube.com/watch?v=Ri5KSjHQ5aY&feature=youtu.be>

Lean A, Brown S, Verma S, Patrao F, Grigg E. Mayo Mat: An Initiative to Improve the Safety and Efficiency of the Anesthesia Cart in Cases Requiring Strict Isolation Precautions. *Anesthesia & Analgesia*. 2020 Oct;131(4):e195-e197. doi:10.1213/ANE.00000000000005127. PMID: 32665461. PMCID: PMC7373362; PMID: 32665461.

Brown S, Patrao F, Verma S, Lean A, Flack S, Polaner D. Barrier System for Airway Management of COVID-19 Patients. *Anesthesia & Analgesia*. 2020 Jul;131(1):e34-e35. doi:10.1213/ANE.0000000000004876. PMID: 33035017; PMCID: PMC7179052.

Brown S, Verma S, Lean A, Patrao F. One Size Does Not Fit All: How to Rapidly Deploy Intubation Practice Changes in a Pediatric Hospital During the COVID-19 Pandemic. *Anesthesia & Analgesia*. 2020 Jul;131(1):e48-e50. doi:10.1213/ANE.0000000000004907. PMID: 32332294.

Fu SW, Lee W, Coffey C, Lean A, Wu X, Tan X, Man YG, Brem RF. miRNAs as potential biomarkers in early breast cancer detection following mammography. *Cell Biosci*. 2016 Jan 26;6:6. doi:10.1186/s13578-016-0071-0. PMID: 26819702; PMCID: PMC4729139.

Sun D, Jiao H, Du J, Zhu Y, Fu Z, Zeng Z, Zheng B, Lean A. Candidemia with Prosthetic Aortic Graft: Case Report. *Journal of Clinical & Cellular Immunology*, 8 (1). 2017. Available from: <http://dx.doi.org/10.4172/2155-9899.1000484>

Lean A, Fu S, Yang J, Tan X, Teal C, Brem R. Circulating miRNA Biomarkers in Early Breast Cancer Detection Following Mammography. GW Research Days; 2016 May 26. Available from: hsrc.himmelfarb.gwu.edu/gw_research_days/2016/SMHS/62/

Lean, A. Communicating: Pediatric Problems. In-Training.org; 2015 Jan. 21. Available from: <https://in-training.org/communicatingpediatric-problems-8001>

Lean, A. Limitless: The Physician as Human. In-Training.org; 2015 Jan 20. Available from: <http://in-training.org/limitless-7869>

PUBLISHED ABSTRACTS AND PRESENTATIONS

California Society of Interventional Pain Physicians, February 2026, Palm Springs, CA

“Spinal Cord Stimulation for Chronic Visceral Abdominal Pain Associated with Peutz-Jegher’s Syndrome”

“Successful Trigeminal Nerve Block for Secondary Trigeminal Neuralgia Caused by NF-2 associated Meningiomas”

“Perioperative Management of a Patient with Primary Adrenal Insufficiency Undergoing Spinal Cord Stimulation”

Association of Academic Physiatry, February 2026, San Juan, Puerto Rico

“Successful Spinal Cord Stimulation Using Thoracic Lead Placement for Chronic Back Pain in Patients with Thoracic Fusion,” Case Report Presentation

American Society of Anesthesia, October 2025, San Antonio, TX

“Spinal Cord Stimulation as a Novel Treatment for Refractory Painful Diabetic Peripheral Neuropathy in a Pediatric Patient: A Case Report,” Gonzales, Luigi MS4; Tran, Matthew MS2

American Society of Pain & Neuroscience, July 2025, Miami, FL

“Spinal Cord Stimulation as a Novel Treatment for Refractory Painful Diabetic Peripheral Neuropathy in a Pediatric Patient: A Case Report,” Gonzales, Luigi MS4; Tran, Matthew MS2

Western Anesthesia Resident’s Conference, 62nd Annual WARC, May 2025, Department of Anesthesiology at the University of Utah

“Treatment of Myelopathy Pain with Spinal Cord Stimulation: A Case Report,” Holland, Alex PGY2; Aina, Mary MS2

ASRA Pain Medicine, November 2024; Las Vegas, NV

“Early Consideration for Intrathecal Baclofen Treatment for Refractory Stiff Person Syndrome: A Case Report”

“An Uncommon Extrusion Complication of a Spinal Cord Stimulator’s Implantable Pulse Generator”

“Cervical Spinal Cord Stimulation for Chronic Pan-Brachial Plexopathy and Spinal Cord Injury”

“Treatment of Pain with Low Dose Naltrexone in a Patient with Ehlers-Danlos Syndrome”

“Incidental Discovery of Renal Cell Carcinoma During Thoracic MRI for Chronic Back Pain”

AAPM&R Annual Assembly, November 2024; San Diego, CA

“Cervical Spinal Cord Stimulation for the Management of Chronic Pain after Traumatic Brachial Plexus Avulsion in Setting of Spinal Cord Injury”

California Society of Interventional Pain Physicians, February 2024; San Diego, CA. “Nutritional Neuropathy: Pain and Vitamin Deficiencies”

UCLA Department of Anesthesia and Perioperative Medicine, Grand Rounds Spring 2023; Los Angeles, CA. Topic: Perioperative Management of Buprenorphine

UCLA Academic Evening, Winter 2023; Los Angeles, CA.

“Not so Mild, MILD Procedure.” Case Report and Presentation with Dr. Logan Woodhouse and Dr. Jakun Ing

UW Department of Anesthesia and Pain Medicine, Grand Rounds Summer 2022; Seattle, WA.

Research Presentation on “Cell-Free DNA Changes to Diagnose Rejection in Heart Transplant Patients”

International Research Anesthesia Society and Society of Critical Care Anesthesia, Spring 2021; Virtual.

The Identification and Management of Acute Respiratory Failure Following Interscalene Catheter in a Patient with Limited Pulmonary Reserve. Supervised by Attending Dr. J. Wu, Department of Anesthesiology and Pain Medicine, UW.

American Society of Regional Anesthesia and Pain Medicine; Fall 2019; New Orleans, LA.

Podium Presentation “Cryoablation of Sciatic Nerve for Treatment of Residual Limb Pain.” Case discussion with attending Dr. J. Wu, Department of Anesthesiology and Pain Medicine, UW

UW Academic Evening, Spring 2019; Seattle, WA.

Poster Presentation “Cryoablation of Sciatic Nerve for Treatment of Residual Limb Pain” with Dr. J. Wu, Department of Anesthesiology and Pain Medicine, UW

American Academy of Pain Medicine’s 34th Annual Meeting; April 2018; Vancouver, Canada.

Poster Presentation “Efficacy of Outpatient Ketamine Infusions in Different Chronic Pain Conditions” with Dr. M. Chin and Dr. R. Amdur, G, The GWU School of Medicine, Department of Anesthesiology.

Association of Anatomists, Experimental Biology Conference; April 2018; San Diego, CA.

“Knowledge Retention Across Curricular Models: An International Collaboration.” Supervised by Dr. Rosalyn Jurjus, The George Washington School of Medicine.

Northeastern Group on Educational Affairs Annual Conference, Donald and Barbara Zucker School of Medicine, Hofstra Northwell; April 2018; Hempstead, NY.

Oral Presentation “Knowledge Retention Across Curricular Models: An International Collaboration” with team Dr. T. Banani and Dr. R. Jurjus. The George Washington School of Medicine.

American Society of Regional Pain and Anesthesia; November 2017; Lake Buena Vista, FL.

Poster Presentation “Efficacy of Outpatient Ketamine Infusions in Different Chronic Pain Conditions” with Drs. M. Chin M, M. Chinn M, and R. Amdur. The GWU School of Medicine, Department of Anesthesiology.

American Society of Anesthesiologists, National Meeting, October 2017; Boston, MA.

Podium Presentation “Outcome Measurements in Chronic Pain Patients Following Outpatient Ketamine Infusions.” With G. Calhoun and M. Chin, The GWU School of Medicine, Department of Anesthesiology.

International Association of Medical Science Educators; June 2017; Burlington, VT.

Poster Presentation “Anatomical Knowledge Retention in Changing Curricula” with Dr. R. Jurjus, The GWU School of Medicine.

Society for Education in Anesthesia; April 2017; Jacksonville, FL.

Poster Presentation “Changing Didactics to Complement Adult Learning Principles” with Drs. G. Gill and A. Sanyal, The GWU School of Medicine

Experimental Biology on behalf of The American Association of Anatomists; April 2017; Chicago, IL.
Podium Presentation “Anatomical Retention in Changing Curricula” with Dr. R. Jurjus, The GWU School of Medicine.

The George Washington Research Symposium; March 2016; Washington, DC.
Podium Presentation and Abstract Award “Early Breast Cancer Detection Following Mammography,” advised by Dr. S. Fu, The George Washington School of Medicine.

WORK EXPERIENCE

Ivy Strategy College Advising, SAT Math Tutor, Saudi Arabia (Fall 2022-present)

Work with post-graduate students on their applications to graduate schools and personal statements. Attend and Teach SAT Math in Riyadh, Saudi Arabia

Core Power Yoga Instructor, Washington, DC (Summer 2015, substitute presently)

Completed 200-hour Yoga Teacher Certification. Focus on Core Strength and Back Pain Prevention

Walt Disney Company, Department of Entertainment, Fuzzy Characters, Anaheim, CA (2013-2014)

Attended Disney University Training, worked as Pluto, Eeyore, Rafiki, Country Bears at the Disneyland Resort.

Marine Biology Instructor, Mountain and Sea Adventures, Catalina, CA (2013)

Taught Outdoor Science School on Catalina Island. Schools would come to the island for 1 week and focus on learning about ocean life, native flora and fauna, as well as pollution and sustainability.

Resident Advisor, UCSD, La Jolla, CA (2011-2012)

Supervised living quarters for freshman dorms, focusing resident support, community building, safety and security, conflict resolution, policy enforcement, administrative duties, on-call duties, resource referral, team collaboration, and resident engagement and programming.

Dance Instructor, All-Star Dance Studio, San Diego, CA (2011-2013)

Instructed ballet, tap, and jazz dance classes to children ages 4-15.

Dance Coach, National Dance Alliance, colleges throughout the United States (Summer 2009)

Taught high school dance team camps at large college campuses. Conducted 1 week intensives focusing on technique, choreography workshops, and team building exercises

COMMUNITY SERVICE AND VOLUNTEER EXPERIENCE

- UCI Anesthesia Interest Group Advisor, Faculty Mentor (2023-present)
- Medical School Application Advisor, personal statement composition (2020-present)
- Alumni Advisor for UCSD undergraduates (2016-present)
- Admissions Committee Applicant Interviewer George Washington University School of Medicine (2015-2017)
- Wellness Partners, Healing Clinic, George Washington University School of Medicine (2013-2014)
- Alternative Breaks Harvest Farm Colorado Rehabilitation Center (Spring 2013)
- Rady Children’s Hospital, Child Life Volunteer (2012)
- Alternative Breaks Gawad Kalinga, Philippines, Non-Profit Volunteer (Spring 2012)
- Intern and grant writer for Sexual Assault Resource Center, UCSD (2011-2012)
- Laboratory Assistant, Thomas Hermann Laboratory, UCSD (Summer 2010-Winter 2011)
- Girl Scout Gold Award, project focused on providing after school dance lessons to underserved community centers in Orange County (2008)

LICENSURE AND CERTIFICATIONS

2023 – Present

ABA Board Certified Anesthesiologist

ABA Pain Board Certified
California State Medical License
Fluoroscopy X-Ray Supervisor and Operator License
Intracept Certification
Kyphoplasty Certification
Minimally Invasive Lumbar Decompression Certification
Advanced Cardiac Life Support and Basic Life Support
COOLIEF Certification (Cooled Radiofrequency Procedures for Chronic Pain management)
NALU Neurostimulation System Bio skills Training Certification
Sprint Neurostimulation System Certification
Spinal Cord Stimulator Certificate from Boston Scientific, Medtronic
Washington State Medical License

2018-2022

HOBBIES AND INTERESTS

Live music. Dancing. Hot Yoga. Snowboarding. Hiking with my dog. Art (sketch, acrylic, graphic design).