

# Sean Lee

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## EDUCATION

**Keck School of Medicine, University of Southern California**

Doctor of Medicine

**Los Angeles, CA**

Expected Graduation May 2027

**University of Southern California**

Bachelor of Science, Human Biology. Healthcare Studies Minor

2019 - 2022

## PUBLICATIONS

Cullaro G, Lai JC, Liu T, Gomez ME, Simonetto DA, Lee BP, **Lee S**, Allegretti AS, Mazumder NR, Patidar KR, Verna EC. Machine learning–derived clinical phenotypes of ascites in cirrhosis: A multi-center latent class analysis with external validation. *Journal of Hepatology*. 2026. (In revision for resubmission)

Elshafei M, Pouwels S, Putnam L, Munoz X, Eini JI, **Lee S**, Lipham JC, Houghton C. Implementation of a standardized protocol for EndoFLIP utilization alters hiatus closure intraoperatively: A proof-of-concept study. 2026. (In submission)

Meremikwu K, **Lee S**, Tang B, Wilson ML, Killu K. Diagnostic Accuracy of Lung Ultrasound for Pneumonia in the Intensive Care Unit: A Systematic Review and Meta-analysis. (In preparation)

## RESEARCH

**USC Keck School of Medicine**

**Los Angeles, CA**

**Department of General Surgery (GLS/MIS) | Dr. John Lipham, Dr. Luke Putnam**

*Research Assistant*

Jan 2026 - Present

- Conducted retrospective chart review and data collection for a study evaluating the impact of intraoperative platelet-rich plasma (PRP) injection on postoperative outcomes following hiatal hernia repair.
- Performed retrospective chart review and data collection evaluating intraoperative EndoFLIP utilization during antireflux surgery and its impact on real-time surgical decision-making and adjustment.
- Prepared results section and contributed to full manuscript development examining whether EndoFLIP-guided intraoperative measurements reduce postoperative reflux and dysphagia outcomes.

**Department of Pulmonary & Critical Care | Dr. Keith Killu**

Nov 2025 - Present

*Project Lead | Research Assistant*

- Conceived and designed an independent retrospective study examining clinical and laboratory predictors of imaging escalation from chest X-ray to CT in hospitalized pneumonia patients, with the goal of developing evidence-based criteria to guide resource-appropriate workup.
- Formulated study hypothesis, defined patient cohort inclusion/exclusion criteria, selected candidate clinical variables, and prepared IRB submission materials.
- Lead all phases of the project including data collection, statistical analysis, and manuscript preparation for peer-reviewed publication.
- Conducted comprehensive systematic literature review and study screening for a meta-analysis comparing diagnostic accuracy of point-of-care ultrasound versus CT for pneumonia, identifying and evaluating studies across multiple databases.
- Extracted and synthesized quantitative data across included studies, assessing methodological quality and pooling effect estimates for analysis.
- Contributing to manuscript drafting and preparation for peer-reviewed submission.

**Department of Transplant Hepatology | Dr. Brian Lee, Dr. Giuseppe Cullaro**

*Research Assistant*

Sept 2024 - Present

- Performed detailed chart review and longitudinal data extraction for 150+ liver transplant patients spanning pre-listing through post-transplant outcomes, requiring individualized manual review of complex transplant records.
- Contributed to a study evaluating Cystatin C-based MELD scoring as a refinement to standard prognostic indices for improving post-transplant outcome prediction.
- Performed chart review and data extraction for a multi-center study identifying clinical predictors of cirrhosis and ascites phenotypes, contributing to a dataset spanning multiple institutions.
- Contributed to manuscript development and review examining phenotype-based risk stratification in cirrhosis; manuscript currently under revision for peer-reviewed publication.

**Department of Emergency Medicine | Dr. Alexander Sapin**

*Research Assistant*

April 2026 - Present

- Contributed to a quality improvement initiative aimed at developing an automated flagging system to identify ED patients at risk for prolonged length of stay (LOS >21 days) to facilitate early disposition planning.
- Performed data collection and analysis of admission diagnostic codes for patients meeting LOS threshold, forming the evidential basis for future flag criteria development.

**USC Alfred E. Mann School of Pharmacy | Dr. Yong (Tiger) Zhang**

*Research Assistant*

**Los Angeles, CA**

June 2020 - June 2022

- Conducted weekly literature reviews screening 200+ papers to identify novel antibody candidates for smart-exosome-based anticancer drug delivery research.
- Performed protein and DNA purification, cell culture maintenance, and preparation of Antibody-Drug Conjugate specimens in support of CD36-targeted cancer antibody studies.

**PERTINENT EMPLOYMENT HISTORY**

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**AHMC: Garfield Medical Center**

*Patient Liaison | Project Manager*

**Monterey Park, CA**

May 2022 - May 2023

- Collaborated with attending physicians and nursing staff to triage and resolve urgent patient needs in real time, contributing to measurable improvements in patient satisfaction and care continuity.
- Served as a real-time medical interpreter across Cantonese, Mandarin, and English, facilitating accurate communication between patients, families, and clinical teams during high-stakes encounters including diagnoses, discharge planning, and informed consent.
- Performed targeted literature reviews synthesizing emerging COVID-19 evidence to support bi-weekly grand rounds presentations attended by medical and administrative staff across the health system.
- Aggregated and analyzed HCAHPS, Leapfrog, and ED-Throughput metrics across a 9-hospital system, translating performance data into actionable summaries to guide senior leadership's operational decisions.
- Drafted and distributed formal meeting minutes for senior administrative and clinical leadership, ensuring accurate documentation of decisions, action items, and follow-ups across high-level institutional meetings.

**LANGUAGES**

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English – Native

Chinese Cantonese – Conversational proficiency

Chinese Mandarin – Intermediate (able to take patient history and perform physical exam)

Spanish – Intermediate (able to take patient history and perform physical exam)

**LEADERSHIP/VOLUNTEER EXPERIENCE**

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**USC Keck School of Medicine**

*Office of Student Affairs | Student Affairs Representative*

**Los Angeles, CA**

Aug 2023 - Aug 2025

- Served as a primary liaison between the student body and institutional administration, advocating for student needs and driving improvements in campus resources and support services.
- Partnered with administrators to identify, propose, and implement targeted solutions addressing student well-being, including housing equity, facility enhancements, and mental health resource accessibility.
- Cultivated an inclusive environment that encouraged student engagement and empowered peers to contribute meaningfully to institutional decision-making and curricular development.

*Gastroenterology Student Interest Group | Vice President*

Aug 2023 - Dec 2024

- Spearheaded programming initiatives by coordinating with faculty and clinical speakers to curate lunch talk series, delivering career-relevant insights to students pursuing medicine.
- Led targeted outreach to identify and compile a diverse roster of research-active faculty, connecting students with mentorship and research opportunities across a broad range of subspecialties and interests.

*USC Photography Club | President | Events Director*

Aug 2020 – Aug 2023

- Led a 15-person executive team to organize events, retreats, and workshops for 2,000+ members, overseeing event planning, marketing, and logistics operations.

**Dmanisi Archaeological Field School**

*Field Researcher*

**Dmanisi, Georgia**

Jun 2019 - Aug 2019

- Participated in active excavation at the Dmanisi site, one of the most significant *Homo erectus* fossil sites outside Africa, gaining hands-on exposure to paleoanthropological methods and human evolutionary history.
- Attended lectures on hominin morphology, species differentiation, and the anthropological significance of early human migration.

**Alhambra Hospital**

*Emergency Medicine Shadowing | Volunteer*

**Alhambra, CA**

July 2020 – Dec 2022

- Observed clinical decision-making in high-acuity emergency settings across diverse patient populations, and assisted nursing staff with patient care, vitals, and unit operations.

**Connect Tech Network**

*Tutor Volunteer*

**San Francisco, CA**

June 2020 – June 2021

- Taught digital literacy (Zoom, Google tools) in Cantonese to elderly clients during COVID-19 to improve accessibility of services.

## PROJECTS

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### **Rounds (Independent Project)**

May 2026

- Designed and developed a cross-platform mobile app (iOS/Android) in React Native to reduce cognitive load during clinical rotations, featuring patient task tracking, clinical timers, and shift signout checklists; no patient data stored.

[\[Rounds. App Store Download\]](#)

### **AI-Powered Clinical Documentation Tool (Independent Project)**

April 2026

- Built a HIPAA-compliant web tool using keyword recognition and speech dictation to generate structured clinical notes, standardizing documentation output across encounter types without retaining patient data.

[\[NoteHelper - Github\]](#)

### **Antibiotic Stewardship Tool (Independent Project)**

May 2026

- Developed a publicly deployed web-based prescribing reference covering 30+ infection types across 9 organ systems, with dynamic adjustments for penicillin allergy and MRSA risk; delivers setting-appropriate regimens (outpatient/floor/ICU) aligned with current IDSA/ASHP guidelines in 3 clicks.

[\[AntibioticStewardshipTool - Github\]](#)

### **Internal Medicine Clinical Scoring Calculator (Independent Project)**

May 2026

- Built a mobile-optimized, offline-capable web calculator consolidating 15 validated scoring tools (HEART, CURB-65, MELD-Na, Wells PE/DVT, SOFA, APACHE II, and others) with real-time interpretation and evidence-based clinical guidance.

[\[InternalMedCalc - Github\]](#)

## CERTIFICATES

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### **Quality Improvement Certificate | USC Keck School of Medicine**

2026

- Completed formal training in QI methodology, including process improvement frameworks and patient safety principles applicable to clinical practice.

### **Certificate of Merit Piano, Level 10 (Highest Level) | Music Teachers' Association of California**

2018

- Achieved the highest level of the statewide classical piano assessment, demonstrating years of disciplined technical and musical development

## PROFESSIONAL INTERESTS

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Piano, Weightlifting, Cycling, Running, Photography.