

CURRICULUM VITAE

Thomas Durant, MD

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Contact Information:

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School: Yale School of Medicine

Education:

06/2004 - 06/2008 BA, Quinnipiac University, Health Sciences, Hamden, CT
06/2008 - 07/2010 MA, Quinnipiac University, Physical Therapy, Hamden, CT
06/2011 - 06/2015 MD, University of Connecticut, School of Medicine, Farmington, CT

Career/Academic Appointments:

07/2015 - 06/2018 Resident, Department of Laboratory Medicine, Yale-New Haven Hospital, New Haven, CT
06/2017 - 06/2018 Chief Resident, Department of Laboratory Medicine, Yale-New Haven Hospital, New Haven, CT
07/2018 - 06/2019 Clinical Fellow, Laboratory Medicine, Yale School of Medicine, New Haven, CT
07/2018 - 06/2019 Winchester Clinical Microbiology Fellow, Department of Laboratory Medicine, Yale-New Haven Hospital, New Haven, CT
07/2019 - 07/2024 Assistant Professor, Laboratory Medicine, Yale School of Medicine, New Haven, CT
03/2023 - 06/2024 Assistant Professor, Biomedical Informatics and Data Science, Yale School of Medicine, New Haven, CT
08/2023 - 12/2023 Lecturer, Molecular Biophysics and Biochemistry, Yale School of Medicine, New Haven, CT
07/2024 - 06/2029 Associate Professor on Term, Laboratory Medicine, Yale School of Medicine, New Haven, CT
08/2024 - 12/2024 Lecturer, Molecular Biophysics and Biochemistry, Yale School of Medicine, New Haven, CT
11/2024 - 06/2029 Associate Professor on Term, Biomedical Informatics and Data Science, Yale School of Medicine, New Haven, CT

Administrative Positions:

2019 - Present	Medical Director, Chemical Pathology, Laboratory Medicine, Yale School of Medicine, New Haven, CT
2019 - Present	Medical Director, Laboratory IT Services, Laboratory Medicine, Yale School of Medicine, New Haven, CT
2019 - Present	Associate Director, ACGME Chemical Pathology Fellowship, Laboratory Medicine, Yale School of Medicine, New Haven, CT

Board Certification:

2018 - 2025	AB of Pathology, Clinical Pathology
2022 - 2025	AB of Pathology, Clinical Informatics
2019 - 2025	AB of Pathology, Medical Microbiology Pathology

Professional Honors & Recognition:

International/National/Regional

2012	Student Summer Research Stipend, UCONN School of Medicine
2014	Jeff Gross Research Award, UCONN School of Medicine
2015	Travel Award, Association for Pathology Informatics
2015	Paul E. Strandjord Young Investigator Award, Academy of Clinical Laboratory Physicians and Scientists
2015	Medical Student Research Award, UCONN School of Medicine
2016	Pan American Society for Clinical Virology Travel Award, American Society of Microbiology
2016	Travel Award, Association for Pathology Informatics
2016	Paul E. Strandjord Young Investigator Award, Academy of Clinical Laboratory Physicians and Scientists
2017	Travel Award, Association for Pathology Informatics
2017	Paul E. Strandjord Young Investigator Award, Academy of Clinical Laboratory Physicians and Scientists
2018	Travel Award, Association for Pathology Informatics
2020	Travel Award, Mass Spec Applications to Clinical Lab , Mass Spectrometry & Advances in the Clinical Lab

Grants/Clinical Trials History:

Past Clinical Trials

Agencies:	College of American Pathologists
I.D.#:	2000020210NHSR
Title:	Moving Averages and Machine Learning for Reducing Medical Error in the Clinical Laboratory
P.I.:	Thomas Durant
Role:	Principal Investigator

Percent effort: N/A
 Total costs: -
 Project period: 02/01/2017

Pending Clinical Trials

Agencies: Cap Foundation Scholars Program
 I.D.#: 2000028760EXEMPT
 Title: Informatics Driven Analysis of COVID-19 Seroconversion
 P.I.: Wade Schulz
 Role: Sub-Investigator
 Percent effort: N/A
 Total costs: -
 Project period: 07/30/2020 - ongoing

Invited Speaking Engagements, Presentations & Workshops Not Affiliated With Yale:

International/National

1. "Biocuration: Ensuring Consistency and Accessibility in Healthcare Data Lakes". Academy of Clinical Laboratory Physicians and Scientists, Annual meeting of the Academy of Clinical Laboratory Physicians and Scientists, New Haven, CT, June 2017. (Oral Presentation)
2. "Machine Learning for Laboratory Medicine". American Association for Clinical Chemistry , American Association for Clinical Chemistry (AACC) Annual Conference, Anaheim, CA, July 2019. (Oral Presentation)
3. "Computer Vision: Current and Potential Applications in Clinical Microbiology.". American Society of Clinical Microbiology, American Society of Clinical Microbiology: Clin Micro Open, Palm Springs, CA, December 2019. (Oral Presentation)
4. "Responding to COVID-19: Riding the Surge". Sunquest & Association for Pathology Informatics, Sunquest and API Virtual Webinar Series, Virtual webinar, April 2020. (Oral Presentation)
5. "The State of Interoperability and External Laboratory Results.". Association for Pathology Informatics, Association for Pathology Informatics: 2020 API Virtual Classroom Series, Virtual Classroom Series, September 2020. (Other)
6. "Impact of COVID-19 Pandemic on Laboratory Utilization.". Journal of Applied Laboratory Medicine, Journal of Applied Laboratory Medicine: Talk Podcasts, Podcast, December 2020. (Other)
7. "Artificial Intelligence and Machine Learning in Digital Pathology". Association for Pathology Informatics, Association for Pathology Informatics: 2020 API Virtual Classroom Series, Webinar: Moderator, December 2020. (Other)
8. "Interoperability: Impetus for Change.". Reagan-Udall Foundation for the FDA, COVID-19 Diagnostics Evidence Accelerator Meetings, Virtual meeting, March 2021. (Oral Presentation)
9. "Interoperability: Impetus for Change.". Clinical Chemistry Journal, Clinical Chemistry Podcasts, Podcast, April 2021. (Other)
10. "What is Data Analytics in Lab Medicine Anyway?". American Association for Diagnostics & Laboratory Medicine, Society for Young Clinical Laboratorians: Webinar Series, Webinar Series, December 2021. (Oral Presentation)

11. "Supervised Machine Learning for Mass Spectrometry Data Analysis: Experts' Opinion". Mass Spectrometry and Advances in the Clinical Lab. Podcast, Podcast, March 2022. (Other)
12. "Machine Learning in Laboratory Medicine: A Pathologist's Experience". American Society for Microbiology, American Society for Microbiology Microbe. Annual Conference, Washington, DC, May 2022. (Oral Presentation)
13. "Laboratory Medicine Beyond the Box: Leveraging Automation, Artificial Intelligence, and Big Data Analysis in Clinical and Public Health Microbiology". American Society for Microbiology, American Society for Microbiology Microbe, Washington, DC, May 2022. (Oral Presentation)
14. "Artificial Intelligence and Pathology Data". International Federation of Clinical Chemistry and Laboratory Medicine-World Lab Congress, Seoul, Seoul, June 2022. (Oral Presentation)
15. "Machine Learning in Lab: Opening Opportunities for Laboratory Stewardship". Association for Diagnostics and Laboratory Medicine, American Association of Clinical Chemistry Middle East, Dubai, Dubai, October 2022. (Oral Presentation)
16. "A Path to Sharing and Integrating Traceable, Clinical Laboratory Data". Association for Diagnostics & Laboratory Medicine, American Association of Clinical Chemistry Middle East, Dubai, Dubai, November 2022. (Oral Presentation)
17. "The State of Interoperability and External Laboratory Results". Association for Diagnostics & Laboratory Medicine, American Association of Clinical Chemistry Middle East, Dubai, Dubai, November 2022. (Oral Presentation)
18. "NGS for Predicting Antimicrobial Susceptibility". American Society of Microbiology , American Society of Microbiology Virtual Journal Club, Virtual journal club presentation - panelist. , August 2023. (Other)
19. "A Roadmap to Successful Data Analytics Projects at your Institution Today and in the Future". Korean Society of Laboratory Medicine, Laboratory Medicine-World Lab Congress, Suwon-si, Gyeonggi-do, October 2023. (Oral Presentation)
20. "The Impact of AI on Clinical Labs". Clin Micro Open (CMO), San Diego, CA, January 2024 - February 2024. (Address)
21. "Artificial Intelligence in the Clinical Laboratory: Leveraging Opportunities and Mitigating Risks". Rochester Mayo Clinic DLMP Grand Rounds, Rochester, MN, June 2024. (Lecture)
22. "Artificial Intelligence in the Clinical Laboratory: Leveraging Opportunities and Mitigating Risks". 2024 AMLI Annual Meeting , Nashville, TN, August 2024. (Oral Presentation)
23. "Artificial Intelligence in the Clinical Laboratory: Leveraging Opportunities and Mitigating Risks". ADLM WebEx, Webinar, October 2024. (Lecture)

Regional

1. "Beaker Implementation: Experience and Perspective". American Association for Clinical Chemistry, Dallas Chapter Meeting, American Association for Clinical Chemistry, Zoom presentation, October 2017. (Oral Presentation)
2. "Technology Enhanced Learning Resources: Virtual Patients.". University of Connecticut School of Medicine, Medical Education Rounds, University of Connecticut School of Medicine., Farmington, CT, February 2018. (Oral Presentation)
3. "Cannabinoids: Introduction and Detection". Connecticut State Police, Connecticut Police Cannabis Toxicology Education, South Central Justice Administration, New Haven, CT, June 2019. (Oral Presentation)

4. "Artificial Intelligence in the Clinical Laboratory: A Path Leading to Opportunity and Risk." University of Connecticut Health Center, Grand Rounds: University of Connecticut Health Center, Department of Pathology and Laboratory Medicine, Farmington, CT, December 2022. (Oral Presentation)
5. "Artificial Intelligence in the Clinical Laboratory: A Path Leading to Opportunity and Risk". Cleveland Clinic Pathology and Laboratory Medicine Institute Grand Rounds, Cleveland, OH, November 2023. (Oral Presentation)

Peer-Reviewed Presentations Given at Meetings Not Affiliated With Yale:

International/National

1. **Durant T** , Nathan Dymant, Mary Beth McCarthy, Augustus Mazzocca, David Rowe. Mesenchymal Progenitor Cell Response to Growth Factor Treatment and Low Oxygen Tension in 3-Dimensional Construct Environment. Orthopaedic Research Society, Annual meeting of Orthopaedic Research Society, New Orleans, LA, March 2014. (Poster Presentation)
2. **Durant T** , Schulz WL. Integration of third-party genetic analysis software into a clinical next generation sequencing data platform. Association for Pathology Informatics , Pathology Informatics Summit, Pittsburgh, PA, May 2015. (Poster Presentation)
3. **Durant T** , Schulz WL, Tormey CA. The Association Between Quantitative HBV Viral Load and HBeAg in HBV Positive Patients. Poster and Platform presentation. Academy of Clinical Laboratory Physicians and Scientists, Annual Meeting of Academy of Clinical Laboratory Physicians and Scientists, Minneapolis, MN, May 2015. (Oral Presentation)
4. **Durant T** , Eben Olsen, Torres R. Morphologic Profiling of Erythrocytes Using Deep Convolutional Neural Networks. Association for Pathology Informatics, Pathology Informatics Summit, Pittsburgh, PA, May 2016. (Oral Presentation)
5. **Durant T** , Schulz WL, El-Khoury JM. Moving Averages: Real-Time Data Monitoring in the Clinical Chemistry Laboratory. Academy of Clinical Laboratory Physicians and Scientists, Annual meeting of the Academy of Clinical Laboratory Physicians and Scientists, Birmingham, AL, June 2016. (Oral Presentation)
6. **Durant T** , Peaper DR. Logistic Regression Modeling: Statistically Driven Stewardship of Anaplasma Polymerase Chain Reaction Testing by Complete Blood Count and Basic Metabolic Profile. American Society for Clinical Pathology, Annual meeting of the American Society for Clinical Pathology, Las Vegas, NV, September 2016. (Poster Presentation)
7. **Durant T** , Peaper DR. Multiplex PCR Respiratory Panel: Two Year Experience Following Core Laboratory Implementation Servicing a Regional Veterans Affairs Medical System. American Society of Microbiology, Clinical Virology Symposium, Savannah, GA, May 2017. (Poster Presentation)
8. **Durant T** , Nathan Price, Gershkovich P, Schulz WL. Streaming Data Science Platform for Laboratory Business Intelligence. Association for Pathology Informatics, Pathology Informatics Summit, Pittsburgh, PA, May 2017. (Oral Presentation)
9. Schulz WL, **Durant T** , Mutnick N, Gershkovich P. Divergent Requirements for Tumor DNA Sequencing Software. Association for Pathology Informatics, Pathology Informatics Summit, Pittsburgh, PA, May 2017. (Oral Presentation)

10. **Durant T** , Schulz WL, Torres R, Smith BR. Electronic Medical Record and Clinical Laboratory Data Integration for Real-Time Quality Management. Association of Pathology Chairs, Annual meeting of the Association of Pathology Chairs, Washington, DC, July 2017. (Poster Presentation)
11. **Durant T** , Eben Olson, Schulz WL, Torres R. Very-Deep Convolutional Neural Networks for Morphologic Classification of Erythrocytes. American Society for Clinical Pathology, Annual meeting of the American Society for Clinical Pathology, New Haven, CT, September 2017. (Oral Presentation)
12. **Durant T** , Schulz WL, Peaper DR. Enhanced Antibigram: Emerging Data Management Technology for Curation and Visual Presentation of Antimicrobial Resistance Patterns. American Society for Clinical Pathology, Annual meeting of the American Society for Clinical Pathology, Chicago, IL, September 2017. (Poster Presentation)
13. **Durant T** , Schulz WL, Eben Olson, Torres R. Enterprise Architecture: A Scalable Data Science Platform to Move Machine Learning from Research to Production Environments. College of American Pathologists, Annual meeting of the College of American Pathologists, Washington, DC, October 2017. (Poster Presentation)
14. **Durant T** , Young HP, Alex Ryder, Eric Gehrie, Tormey CA, Schulz WL. Private Blockchain Distribution Network for Blood-Derived Biologic Products. Association for Pathology Informatics , Pathology Informatics Summit, Pittsburgh, PA, May 2018. (Oral Presentation)
15. Dustin Bunch, **Durant T** , Burak Bahar, Nathan Price, Charles Torre, Young HP, Will Byron, El-Khoury JM, Schulz WL. Predictive Analytics to Identify Patients that May Benefit from Pharmacogenomic Screening. Association for Pathology Informatics , Pathology Informatics Summit, Pittsburgh, PA, May 2018. (Oral Presentation)
16. **Durant T** , Schulz WL. Bridging the Collaboration Gap: Real-Time Identification of Clinical Specimens for Biomedical Research. Association for Pathology Informatics, Pathology Informatics Summit, Pittsburgh, PA, May 2018. (Oral Presentation)
17. Dustin Bunch, Burak Bahar, **Durant T** , Nathan Price, Charles Torre, Young HP, Will Byron, El-Khoury JM, Schulz WL. Predictive Analytics to Identify Patients that May Benefit from Pharmacogenomic Screening.. Academy of Clinical Laboratory Physicians and Scientists, ACLPS annual meeting, Houston, TX, June 2018. (Poster Presentation)
18. **Durant T** , Kellie Bresz, Kevin Kiefert, Johnny Izzo, Ronald Gibson, Shital Desai, Prem Thomas, Rathbone R. Slicer Dicer Groupers: An Optimization Effort for Ease of Search. Epic, Epic Users Group Meeting, Madison, WI, October 2018. (Oral Presentation)
19. **Durant T** , Schulz WL, Tomassoni A. Drug of Abuse Testing: A Retrospective Analysis of Test Utilization and Detection Characteristics. North American Congress of Clinical Toxicology, Annual meeting of the North American Congress of Clinical Toxicology, Chicago, IL, October 2018. (Poster Presentation)
20. **Durant T** , Schulz WL, Dustin Bunch, Tormey CA, El-Khoury JM. Simple Moving Averages: Comparison to Westgard Control Rules in the Clinical Chemistry Lab. American Society for Clinical Pathology, Annual meeting of the American Society for Clinical Pathology, Houston, TX, November 2018. (Oral Presentation)
21. Daniel Nogee, **Durant T** , Dustin Bunch, Barry Logan, Tarabar AF, Tomassoni A. A Synthetic Cannabinoid Mass-Overdose in New Haven, Connecticut. American College of Medical Toxicology , American College of Medical Toxicology Annual Scientific Meeting, San Francisco, CA, March 2019. (Oral Presentation)

22. Dustin Bunch, **Durant T** , Daniel Noguee, Barry Logan, Bogucki SS, Tomassoni A, Tarabar AF. Mass spectrometry and Mass-Overdose in New Haven, Connecticut. Mass Spectrometry and Advances in the Clinical Lab, Mass Spectrometry Applications to the Clinical Lab Annual Conference, Palm Springs, CA, March 2019. (Oral Presentation)
23. **Durant T** , Nejla Kubilay, Jacob Merwede, Dembry L, Peaper DR. Antimicrobial Stewardship Optimization: The Effect of Multiplex Respiratory Pathogen Testing and Targeted Educational Intervention. American Society of Microbiology, Clinical Virology Symposium, Savannah, GA, May 2019. (Poster Presentation)
24. **Durant T** . The State of Interoperability and External Laboratory Results. Annual Scientific Meeting and Clinical Lab Expo, AACC Annual Scientific Meeting, Atlanta, GA, September 2021. (Oral Presentation)
25. **Durant T** , David McClintock. Data Aggregation and Integration in Laboratory Medicine: How to Build Prediction Models and Learn from Multi-Institutional Data. Annual Scientific Meeting & Clinical Lab Expo, AACC Annual Scientific Meeting, Atlanta, GA, September 2021. (Oral Presentation)
26. **Durant T** . Do You Want to Be Responsible for Your Hospital Being Hacked? Cybersecurity and Information Assurance Fundamentals for Laboratory Medicine. Annual Scientific Meeting and Clinical Lab Expo, AACC Annual Scientific Meeting, Chicago, IL, July 2022. (Oral Presentation)
27. **Durant T** . Machine Learning 101: Opening Opportunities for Laboratory Stewardship. Annual Scientific Meeting and Clinical Lab Expo, AACC Annual Scientific Meeting, Chicago, IL, July 2022. (Oral Presentation)
28. Ibrahim Choucair, Michael Vera, Lee ES, El-Khoury JM, **Durant T** . Detecting Pre-Analytical Error in the Laboratory: An Experimental Approach to Derive Delta Checks for Sample Contamination. Association for Diagnostics and Laboratory Medicine, AACC Annual Scientific Meeting, Chicago, IL, July 2022. (Oral Presentation)
29. **Durant T** . Creating a Reference Interval Database to Support Clinical AI/ML Applications with Generalizable Laboratory Phenotypes. Association for Pathology Informatics , Pathology Informatics Summit, Pittsburgh, PA, May 2023. (Oral Presentation)
30. **Durant T** . The ABCs of Data Analytics in the Laboratory: Tackling Complexity with Confidence. Association for Diagnostics and Laboratory Medicine, AACC Annual Scientific Meeting, Anaheim, CA, July 2023. (Oral Presentation)
31. **Durant T** . Future Considerations for Artificial Intelligence and Machine Learning in the Clinical Laboratories: A Focus on Ethics, Regulatory, and Data Governance.. Association for Diagnostics and Laboratory Medicine, AACC Annual Scientific Meeting, Anaheim, CA, July 2023. (Oral Presentation)
32. **Durant T** . Beyond the Buzz: Practical Pathways to AI Deployment in Clinical Laboratories. ADLM Annual Meeting, Chicago, IL, July 2024 - August 2024. (Oral Presentation)

Professional Service:

Peer Review Groups/Grant Study Sections

2019 - Present Abstract Reviewer, Academy of Clinical Laboratory Physicians and Scientists

Journal Services

Reviewer

2019 - Present	Reviewer, Journal of Clinical Microbiology
2019 - Present	Reviewer, Journal of Clinical Chemistry
2019 - Present	Reviewer, Journal of Pathology Informatics
2020 - Present	Reviewer, American Journal of Clinical Pathology
2020 - Present	Reviewer, Journal of Applied Laboratory Medicine

Professional Organizations

Association for Diagnostics and Laboratory Medicine

2020 - 2023	Member, Association for Diagnostics and Laboratory Medicine, Data Analytics Steering Committee
2021 - 2024	Member, Association for Diagnostics and Laboratory Medicine, Society for Young Clinical Laboratorians; Core Committee

Association for Pathology Informatics

2023 - Present	Member, Association for Pathology Informatics, Technology Standards and Innovation (TSI) Committee
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Clinical and Laboratory Standards Institute

2020 - 2023	Member, Clinical and Laboratory Standards Institute, Document development committee for; AUTO11: Information Technology Security of In Vitro Diagnostic Instruments and Software Systems, 3rd Edition
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College of American Pathologists

2021 - 2024	Member, College of American Pathologists, Informatics Committee
2022 - Present	Member, College of American Pathologists, Practice Integration and Education in AI Work Group
2024 - Present	Vice Chair, College of American Pathologists, Informatics Committee

Yale University / Hospital System

University

2020 - 2024	Member, Yale School of Medicine, Institutional Review Board
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Hospital

2019 - Present	Member, Yale-New Haven Hospital, Laboratory Information System Steering Committee
2019 - Present	Member, Yale-New Haven Hospital, Integrated Chemistry Committee
2019 - 2021	Member, Yale-New Haven Hospital, Beaker Advisory Committee
2019 - Present	Member, Yale-New Haven Hospital, Residency Selection Committee

2024 - Present

Member, YNHH, Laboratory Care Signature Council

Bibliography:

Peer-Reviewed Original Research

1. Beitzel K, McCarthy MB, Cote MP, **Durant TJ**, Chowaniec DM, Solovyova O, Russell RP, Arciero RA, Mazzocca AD. Comparison of Mesenchymal Stem Cells (Osteoprogenitors) Harvested From Proximal Humerus and Distal Femur During Arthroscopic Surgery. *Arthroscopy The Journal Of Arthroscopic And Related Surgery* 2013, 29: 301-308. [PMID: 23290182](#) , [DOI: 10.1016/j.arthro.2012.08.021](#) .
2. **Durant TJ**, Dymment N, McCarthy MB, Cote MP, Arciero RA, Mazzocca AD, Rowe D. Mesenchymal stem cell response to growth factor treatment and low oxygen tension in 3-dimensional construct environment. *Muscles, Ligaments And Tendons Journal* 2014, 4: 46-51. [PMID: 24932447](#) , [PMCID: PMC4049650](#) .
3. Intravia J, Allen DA, **Durant TJ**, McCarthy MB, Russell R, Beitzel K, Cote MP, Dias F, Mazzocca AD. In vitro evaluation of the anti-bacterial effect of two preparations of platelet rich plasma compared with cefazolin and whole blood. *Muscles Ligaments And Tendons Journal* 2014, 4: 79-84. [PMID: 24932452](#) , [PMCID: PMC4049655](#) , [DOI: 10.11138/mltj/2014.4.1.079](#) .
4. MacAskill MJ, **Durant TJ**, Wallace DA. Gluteal muscle activity during weightbearing and non-weightbearing exercise. *International Journal Of Sports Physical Therapy* 2014, 9: 907-14. [PMID: 25540706](#) , [PMCID: PMC4275195](#) .
5. Schulz W, **Durant T**, Rinder H, Tormey C, Torres R, Smith B, Hager K, Howe J, Siddon A. Impact of Molecular Clonality on Survival in Acute Myeloid Leukemia. *Blood* 2015, 126: 1385. [DOI: 10.1182/blood.v126.23.1385.1385](#) .
6. Schulz WL, **Durant TJ**, Siddon AJ, Torres R. Use of application containers and workflows for genomic data analysis. *Journal Of Pathology Informatics* 2016, 7: 53. [PMID: 28163975](#) , [PMCID: PMC5248400](#) , [DOI: 10.4103/2153-3539.197197](#) .
7. **Durant TJ**, Dwyer CR, McCarthy MB, Cote MP, Bradley JP, Mazzocca AD. Protective Nature of Platelet-Rich Plasma Against Chondrocyte Death When Combined With Corticosteroids or Local Anesthetics. *The American Journal Of Sports Medicine* 2016, 45: 218-225. [PMID: 27582279](#) , [DOI: 10.1177/0363546516664161](#) .
8. Schulz WL, Nelson BG, Felker DK, **Durant TJ**, Torres R. Evaluation of relational and NoSQL database architectures to manage genomic annotations. *Journal Of Biomedical Informatics* 2016, 64: 288-295. [PMID: 27810480](#) , [DOI: 10.1016/j.jbi.2016.10.015](#) .
9. **Durant T**, Olson EM, Schulz WL, Torres R. Very Deep Convolutional Neural Networks for Morphologic Classification of Erythrocytes. *Clinical Chemistry* 2017, 63: 1847-1855. [PMID: 28877918](#) , [DOI: 10.1373/clinchem.2017.276345](#) .
10. **Durant T**, Dymment N, McCarthy M, Cote M, Arciero R, Mazzocca A, Rowe D. Mesenchymal stem cell response to growth factor treatment and low oxygen tension in 3-dimensional construct environment. *Muscles Ligaments And Tendons Journal* 2019, 04: 46. [DOI: 10.32098/mltj.01.2014.09](#) .
11. Intravia J, Allen D, **Durant T**, McCarthy M, Russell R, Beitzel K, Cote M, Dias F, Mazzocca A. In vitro evaluation of the anti-bacterial effect of two preparations of platelet rich plasma compared with

- cefazolin and whole blood. Muscles Ligaments And Tendons Journal 2019, 04: 79. [DOI: 10.32098/mltj.01.2014.14](#) .
12. McPadden J, **Durant TJ** , Bunch DR, Coppi A, Price N, Rodgers K, Torre CJ, Byron W, Hsiao AL, Krumholz HM, Schulz WL. Health Care and Precision Medicine Research: Analysis of a Scalable Data Science Platform. Journal Of Medical Internet Research 2019, 21: e13043. [PMID: 30964441](#) , [PMCID: PMC6477571](#) , [DOI: 10.2196/13043](#) .
 13. **Durant TJS** , Merwede J, Reynolds J, Peaper DR. Optimization of Turnaround Time for Group A Streptococcus PCR. Journal Of Clinical Microbiology 2019, 57: 10.1128/jcm.00619-19. [PMID: 31217271](#) , [PMCID: PMC6711925](#) , [DOI: 10.1128/jcm.00619-19](#) .
 14. **Durant TJS** , Gong G, Price N, Schulz WL. Bridging the Collaboration Gap: Real-time Identification of Clinical Specimens for Biomedical Research. Journal Of Pathology Informatics 2020, 11: 14. [PMID: 32477620](#) , [PMCID: PMC7245342](#) , [DOI: 10.4103/jpi.jpi_15_20](#) .
 15. Schulz WL, **Durant T** , Torre CJ, Hsiao AL, Krumholz HM. Agile Health Care Analytics: Enabling Real-Time Disease Surveillance With a Computational Health Platform. Journal Of Medical Internet Research 2020, 22: e18707. [PMID: 32442130](#) , [PMCID: PMC7257473](#) , [DOI: 10.2196/18707](#) .
 16. **Durant TJS** , Peaper DR, Ferguson D, Schulz WL. Impact of COVID-19 Pandemic on Laboratory Utilization. The Journal Of Applied Laboratory Medicine 2020, 5: 1194-1205. [PMID: 32663258](#) , [PMCID: PMC7454564](#) , [DOI: 10.1093/jalm/jfaa121](#) .
 17. Schulz WL, Rinder HM, **Durant TJS** , Tormey CA, Torres R, Smith BR, Hager KM, Howe JG, Siddon AJ. Impact of intra-tumoral heterogeneity detected by next-generation sequencing on acute myeloid leukemia survival. Leukemia & Lymphoma 2020, 61: 3269-3271. [PMID: 32715805](#) , [DOI: 10.1080/10428194.2020.1797016](#) .
 18. **Durant TJS** , Kubilay NZ, Reynolds J, Tarabar AF, Dembry LM, Peaper DR. Antimicrobial Stewardship Optimization in the Emergency Department: The Effect of Multiplex Respiratory Pathogen Testing and Targeted Educational Intervention. The Journal Of Applied Laboratory Medicine 2020, 5: 1172-1183. [PMID: 32918445](#) , [DOI: 10.1093/jalm/jfaa130](#) .
 19. **Durant TJS** , Jean RA, Huang C, Coppi A, Schulz WL, Geirsson A, Krumholz HM. Evaluation of a Risk Stratification Model Using Preoperative and Intraoperative Data for Major Morbidity or Mortality After Cardiac Surgical Treatment. JAMA Network Open 2020, 3: e2028361. [PMID: 33284333](#) , [PMCID: PMC11841993](#) , [DOI: 10.1001/jamanetworkopen.2020.28361](#) .
 20. McPadden J, Warner F, Young HP, Hurley NC, Pulk RA, Singh A, **Durant TJS** , Gong G, Desai N, Haimovich A, Taylor RA, Gunel M, Dela Cruz CS, Farhadian SF, Siner J, Villanueva M, Churchwell K, Hsiao A, Torre CJ, Velazquez EJ, Herbst RS, Iwasaki A, Ko AI, Mortazavi BJ, Krumholz HM, Schulz WL. Clinical characteristics and outcomes for 7,995 patients with SARS-CoV-2 infection. PLOS ONE 2021, 16: e0243291. [PMID: 33788846](#) , [PMCID: PMC8011821](#) , [DOI: 10.1371/journal.pone.0243291](#) .
 21. Koch CD, Vera MA, Messina J, Price N, **Durant TJS** , El-Khoury JM. Preventing pseudohyponatremia: Intralipid®-based lipemia cutoffs for sodium are inappropriate. Clinica Chimica Acta 2021, 520: 63-66. [PMID: 34077753](#) , [DOI: 10.1016/j.cca.2021.05.032](#) .
 22. El-Khoury JM, Schulz WL, **Durant TJS** . Longitudinal Assessment of SARS-CoV-2 Anti-Nucleocapsid and anti-Spike-1-RBD Antibody Testing Following PCR-Detected SARS-CoV-2 Infection. The Journal Of Applied Laboratory Medicine 2021, 6: jfab030-. [PMID: 33822964](#) , [PMCID: PMC8083453](#) , [DOI: 10.1093/jalm/jfab030](#) .
 23. Mori M, **Durant TJS** , Huang C, Mortazavi BJ, Coppi A, Jean RA, Geirsson A, Schulz WL, Krumholz HM. Toward Dynamic Risk Prediction of Outcomes After Coronary Artery Bypass Graft. Circulation

- Cardiovascular Quality And Outcomes 2021, 14: e007363. [PMID: 34078100](#) , [PMCID: PMC8635167](#) , [DOI: 10.1161/circoutcomes.120.007363](#) .
24. **Durant TJS** , Dudgeon SN, McPadden J, Simpson A, Price N, Schulz WL, Torres R, Olson EM. Applications of Digital Microscopy and Densely Connected Convolutional Neural Networks for Automated Quantification of Babesia-Infected Erythrocytes. Clinical Chemistry 2021, 68: 218-229. [PMID: 34969114](#) , [DOI: 10.1093/clinchem/hvab237](#) .
 25. Kerantzas CA, Merwede JP, Fadlallah H, **Durant TJS** , Peaper DR. Quality Management to Improve CSF Gram Stain Turnaround Time. The Journal Of Applied Laboratory Medicine 2022, 7: 782-787. [PMID: 35018424](#) , [DOI: 10.1093/jalm/jfab165](#) .
 26. Choucair I, Lee ES, Vera MA, Drongmebaro C, El-Khoury JM, **Durant TJS** . Contamination of clinical blood samples with crystalloid solutions: An experimental approach to derive multianalyte delta checks. Clinica Chimica Acta 2022, 538: 22-28. [PMID: 36309069](#) , [DOI: 10.1016/j.cca.2022.10.011](#) .
 27. Choucair I, Villalba C, Vera M, Cassella-McLane G, **Durant T** , El-Khoury J. A preliminary study of hydrocodone and hydromorphone to oxycodone ratios for distinguishing impurities from independent opioid use. Clinical Biochemistry 2022, 112: 6-10. [PMID: 36535386](#) , [DOI: 10.1016/j.clinbiochem.2022.12.009](#) .
 28. **Durant T** , Peaper D. Retrospective evaluation of clinical decision support for within-laboratory optimization of SARS-CoV-2 NAAT workflow. Journal Of Clinical Microbiology 2023, 62: e00785-23. [PMID: 38132702](#) , [PMCID: PMC10865785](#) , [DOI: 10.1128/jcm.00785-23](#) .
 29. **Durant T** , Knight E, Nelson B, Dudgeon S, Lee S, Walliman D, Young H, Ohno-Machado L, Schulz W. A primer for quantum computing and its applications to healthcare and biomedical research. Journal Of The American Medical Informatics Association 2024, 31: 1774-1784. [PMID: 38934288](#) , [PMCID: PMC11258415](#) , [DOI: 10.1093/jamia/ocae149](#) .
 30. Militello L, El-Khoury J, **Durant T** . Accounting for differences between serum and plasma: An indirect approach to derive reference intervals for total protein, albumin, and globulin. Clinica Chimica Acta 2024, 562: 119851. [PMID: 38977172](#) , [DOI: 10.1016/j.cca.2024.119851](#) .
 31. Spies N, Militello L, Farnsworth C, El-Khoury J, **Durant T** , Zaydman M. Prospective and External Validation of an Ensemble Learning Approach to Sensitively Detect Intravenous Fluid Contamination in Basic Metabolic Panels. Clinical Chemistry 2024, 71: 296-306. [PMID: 39545815](#) , [DOI: 10.1093/clinchem/hvae168](#) .

Peer-Reviewed Reviews, Practice Guidelines, Standards, and Consensus Statements

1. Apostolakos J, **Durant TJ** , Dwyer CR, Russell RP, Weinreb JH, Alaei F, Beitzel K, McCarthy MB, Cote MP, Mazzocca AD. The enthesis: a review of the tendon-to-bone insertion. Muscles Ligaments And Tendons Journal 2014, 4: 333-42. [PMID: 25489552](#) , [PMCID: PMC4241425](#) , [DOI: 10.11138/mltj/2014.4.3.333](#) .
2. Apostolakos J, **Durant T** , Dwyer C, Russell R, Weinreb J, Alaei F, Beitzel K, McCarthy M, Cote M, Mazzocca A. The enthesis: a review of the tendon-to-bone insertion. Muscles Ligaments And Tendons Journal 2019, 04: 333. [DOI: 10.32098/mltj.03.2014.12](#) .
3. Peaper DR, **Durant T** , Campbell S. Distributed Microbiology Testing Bringing Infectious Disease Diagnostics to Point of Care. Clinics In Laboratory Medicine 2019, 39: 419-431. [PMID: 31383266](#) , [DOI: 10.1016/j.cll.2019.05.004](#) .

4. Smith K, Wang H, **Durant T**, Mathison B, Sharp S, Kirby J, Long S, Rhoads D. Applications of Artificial Intelligence in Clinical Microbiology Diagnostic Testing. Clinical Microbiology Newsletter 2020, 42: 61-70. [DOI: 10.1016/j.clinmicnews.2020.03.006](https://doi.org/10.1016/j.clinmicnews.2020.03.006) .
5. Herman DS, Rhoads DD, Schulz WL, **Durant TJS** . Artificial Intelligence and Mapping a New Direction in Laboratory Medicine: A Review. Clinical Chemistry 2021, 67: 1466-1482. [PMID: 34557917](https://pubmed.ncbi.nlm.nih.gov/34557917/) , [DOI: 10.1093/clinchem/hvab165](https://doi.org/10.1093/clinchem/hvab165) .
6. Peaper DR, Kerantzas CA, **Durant TJS** . Advances in molecular infectious diseases testing in the time of COVID-19. Clinical Biochemistry 2022, 117: 94-101. [PMID: 35181291](https://pubmed.ncbi.nlm.nih.gov/35181291/) , [PMCID: PMC8843810](https://pubmed.ncbi.nlm.nih.gov/PMC8843810/) , [DOI: 10.1016/j.clinbiochem.2022.02.005](https://doi.org/10.1016/j.clinbiochem.2022.02.005) .
7. Bunch D, **Durant T**, Rudolf J. Artificial Intelligence Applications in Clinical Chemistry. Clinics In Laboratory Medicine 2022, 43: 47-69. [PMID: 36764808](https://pubmed.ncbi.nlm.nih.gov/36764808/) , [DOI: 10.1016/j.cll.2022.09.005](https://doi.org/10.1016/j.cll.2022.09.005) .
8. Patel A, Williams C, Hart S, Garcia C, **Durant T**, Cornish T, McClintock D. Cybersecurity and Information Assurance for the Clinical Laboratory. The Journal of Applied Laboratory Medicine 2023, 8: 145-161. [PMID: 36610432](https://pubmed.ncbi.nlm.nih.gov/36610432/) , [DOI: 10.1093/jalm/jfac119](https://doi.org/10.1093/jalm/jfac119) .
9. Chang T, Herman D, McClintock D, **Durant T** . The Roadmap to Interoperability and Laboratory Data: Current State and Next Steps. The Journal Of Applied Laboratory Medicine 2023, 8: 226-228. [PMID: 36610435](https://pubmed.ncbi.nlm.nih.gov/36610435/) , [DOI: 10.1093/jalm/jfac082](https://doi.org/10.1093/jalm/jfac082) .
10. Ghazi L, Farhat K, Hoenig M, **Durant T**, El-Khoury J. Biomarkers vs Machines: The Race to Predict Acute Kidney Injury. Clinical Chemistry 2024, 70: 805-819. [PMID: 38299927](https://pubmed.ncbi.nlm.nih.gov/38299927/) , [DOI: 10.1093/clinchem/hvad217](https://doi.org/10.1093/clinchem/hvad217) .

Peer-Reviewed Educational Materials

1. Lee ES, **Durant TJS** . Supervised machine learning in the mass spectrometry laboratory: A tutorial. Journal Of Mass Spectrometry And Advances In The Clinical Lab 2021, 23: 1-6. [PMID: 34984411](https://pubmed.ncbi.nlm.nih.gov/34984411/) , [PMCID: PMC8692990](https://pubmed.ncbi.nlm.nih.gov/PMC8692990/) , [DOI: 10.1016/j.jmsacl.2021.12.001](https://doi.org/10.1016/j.jmsacl.2021.12.001) .
2. Durant T, Seheult JN; College of American Pathologists (CAP) Informatics Committee. 2024 ICBE-B: AI/Predictive Model Verification. Northfield, IL: CAP; 2024.
3. Cassella-McLane G, McGowan M, Kodger J, Durant TJS. Automated Quality Assurance Rules for Liquid Chromatography–Mass Spectrometry Testing in a Clinical Laboratory. Clinics in Laboratory Medicine. 2025;0(0). doi:10.1016/j.cll.2025.01.006

Peer-Reviewed Case Reports and Technical Notes

1. **Durant TJ**, Cote MP, Arciero RA, Mazzocca AD. Fatal pulmonary embolism after arthroscopic rotator cuff repair: a case series. Muscles Ligaments And Tendons Journal 2014, 4: 232-7. [PMID: 25332941](https://pubmed.ncbi.nlm.nih.gov/25332941/) , [PMCID: PMC4187592](https://pubmed.ncbi.nlm.nih.gov/PMC4187592/) , [DOI: 10.11138/mltj/2014.4.2.1232](https://doi.org/10.11138/mltj/2014.4.2.1232) .
2. **Durant TJ**, Swanson BT, Cote MP, Allen DA, Arciero RA, Mazzocca AD. Upper extremity deep venous thromboembolism following arthroscopic labral repair of the shoulder and biceps tenodesis: a case report. International Journal Of Sports Physical Therapy 2014, 9: 377-82. [PMID: 24944857](https://pubmed.ncbi.nlm.nih.gov/24944857/) , [PMCID: PMC4060316](https://pubmed.ncbi.nlm.nih.gov/PMC4060316/) .
3. **Durant TJ**, Olsen J, Bhuvu V, Mogen J, Jacob J. Perinephric Abscess with Fistula Formation to Descending Colon: A Case Report and a Review of the Literature. Connecticut Medicine 2015, 79: 221-4. [PMID: 26259301](https://pubmed.ncbi.nlm.nih.gov/26259301/) .

4. Tomassoni AJ, Hawk KF, Jubanyik K, Nogee DP, **Durant T**, Lynch KL, Patel R, Dinh D, Ulrich A, D'Onofrio G. Multiple Fentanyl Overdoses — New Haven, Connecticut, June 23, 2016. MMWR Morbidity And Mortality Weekly Report 2017, 66: 107-111. [PMID: 28151928](#) , [PMCID: PMC5657834](#) , [DOI: 10.15585/mm6604a4](#) .
5. **Durant T**, Garofalo M, Arciero R, Mazzocca A. Fatal pulmonary embolism after arthroscopic rotator cuff repair: a case series. Muscles Ligaments And Tendons Journal 2019, 04: 232. [DOI: 10.32098/mltj.02.2014.25](#) .
6. Binns TC, Koch CD, **Durant TJS**, El-Khoury JM. CO-Oximetry Interference in a Patient with Dyspnea Refractory to Oxygen Therapy. The Journal Of Applied Laboratory Medicine 2021, 6: 1671-1676. [PMID: 34383919](#) , [DOI: 10.1093/jalm/jfab071](#) .
7. Choucair I, Cassella-McLane G, Rogers K, **Durant T**, El-Khoury J. An Unusual Case of High 6-Monoacetylmorphine and Low Morphine in Urine: Heroin Abuse or Analytical Error? Clinical Chemistry 2022, 68: 1344-1345. [PMID: 37619530](#) , [DOI: 10.1093/clinchem/hvac110](#) .

Books

1. Beitzel K, **Durant T**, Mazzocca A. Operative Treatment of Injuries of the Acromioclavicular Joint. 2013, 151-151. [DOI: 10.5005/jp/books/11725_17](#) .

Commentaries, Editorials and Letters

1. **Durant T**. Translational Proteomics: Driving Biomarker Discovery in the Clinical Laboratory. Clinical Chemistry 2019, 65: 817-818. [PMID: 32100847](#) , [DOI: 10.1373/clinchem.2019.304642](#) .
2. Schulz WL, **Durant T**, Krumholz HM. Validation and Regulation of Clinical Artificial Intelligence. Clinical Chemistry 2019, 65: 1336-1337. [PMID: 32100825](#) , [DOI: 10.1373/clinchem.2019.308304](#) .
3. Peaper DR, Durant TS. Can Circulating Cell-Free Microbial DNA Carry Us into the Future of Culture Independent Microbiology? Clinical Chemistry 2019, 66: 29-32. [PMID: 31601563](#) , [DOI: 10.1373/clinchem.2019.304220](#) .
4. Campbell S, Anderson N, Babady E, **Durant TJS**, Fisher A, Moore N. Centralized vs Decentralized Molecular Infectious Disease Testing. Clinical Chemistry 2021, 67: 713-719. [PMID: 33517379](#) , [DOI: 10.1093/clinchem/hvaa318](#) .
5. Greene DN, McClintock DS, **Durant TJS**. Interoperability: COVID-19 as an Impetus for Change. Clinical Chemistry 2021, 67: 592-595. [PMID: 33475729](#) , [PMCID: PMC7929044](#) , [DOI: 10.1093/clinchem/hvab006](#) .
6. Marin MJ, Van Wijk XMR, **Durant TJS**. Machine Learning in Healthcare: Mapping a Path to Title 21. Clinical Chemistry 2022, 68: 609-610. [PMID: 36149375](#) , [DOI: 10.1093/clinchem/hvab285](#) .
7. Hänsel K, Dudgeon S, Cheung K, **Durant T**, Schulz W. From Data to Wisdom: Biomedical Knowledge Graphs for Real-World Data Insights. Journal Of Medical Systems 2023, 47: 65. [PMID: 37195430](#) , [PMCID: PMC10191934](#) , [DOI: 10.1007/s10916-023-01951-2](#) .
8. Merrill A, **Durant T**, Baron J, Klutts J, Obstfeld A, Peaper D, Stoffel M, Wheeler S, Zaydman M. Data Analytics in Clinical Laboratories: Advancing Diagnostic Medicine in the Digital Age. Clinical Chemistry 2023, 69: 1333-1341. [PMID: 37962514](#) , [DOI: 10.1093/clinchem/hvad183](#) .
9. Arun AS, Durant TJS, El-Khoury JM, Krumholz HM. Reevaluating the Threshold for Low Total Testosterone. Clinical Chemistry. Published online April 16, 2025:hvac025. doi:10.1093/clinchem/hvac025