
PMM – 2025 in Review

Department of Pathology and Molecular Medicine

2025 was a busy and productive year for the Department of Pathology and Molecular Medicine. We worked through the challenges of implementing Lumeo, the new regional health system, while also addressing ongoing staffing pressures, and continuing to deliver high-quality diagnostic care with turnaround times that remain among the best in the province. That consistency reflects truly outstanding commitment and professionalism from our faculty, staff, and trainees. Along the way, teams across the department introduced new assays, technologies, and workflows that are already improving how we care for patients.

On the academic side, this was another strong year. Our group medicine as a discipline and practice while continuing to build momentum in grant funding. Much of this work reflects increasingly collaborative, team-based science, particularly in areas like genomics, blood disease, digital pathology, and translational cancer research, where we see growing scale and impact.

We also made steady progress on longer-term priorities. Investments in genomics, digital pathology, and core infrastructure that position us well for the next phase of precision medicine, and our education programs continue to grow and attract outstanding students and trainees to pathology.

Overall, this was a year where we managed change but also kept moving forward strengthening our academic mission while continuing to deliver for patients.

Thank you for all your contributions.

David Berman, Department Head



Clinical Advancements and Innovations

Anatomic Pathology (Dr. Grin)



In 2025, we got to know our new regional health system, Lumeo. Navigating a new health system was not easy, especially one of this magnitude encompassing all hospitals and departments within the Southeast Region. While there have been numerous challenges, we worked through and continue to work through the issues by collaborating and finding creative ways to resolve problems. Thank you to everyone for their patience and for working so hard to improve our system. A special mention to those who were new to their leadership roles this year during this time of change: Keyur Dixit, our new Histology manager and Sam Fuchs transitioned to Charge Technologist.

Despite these challenges and a number of staffing shortages throughout the year, the Division continued to maintain exemplary turnaround times. Our Cancer Care Ontario turnaround time has been shorter than the provincial average and is one of the best in the province. Maintaining this level of quality is a testament to the hard work and dedication of everyone.

In addition, in the past year, we implemented new CCO funded biomarkers such as Claudin for upper gastrointestinal adenocarcinoma thanks to the initiative of Dr. Tao Wang and successfully transitioned our cervical cancer screening cytology program to comply with the new HPV testing requirements thanks to the leadership of Dr. Chris Davidson. Our vision towards Digital Pathology is progressing thanks to Dr. Sonal Varma.

Hematopathology, Coagulation, and Transfusion Medicine (Dr. Good)



This was a challenging year with the Lumeo implementation; however, staff have been resilient, adapted well, and continue to provide valuable input to support system optimization. The final regional CellaVision digital blood film platform site went live in the summer of 2025, resulting in nearly all blood film reviews at KHSC now being performed digitally. The Hematology Laboratory has received approval to implement a LAMP assay for malaria screening, which will significantly reduce the time required to review thin and thick smears for negative malaria requests. This assay is expected to go live in early 2026.

The Transfusion Laboratory has implemented a second Vision analyzer for automated blood grouping and antibody screening and continues to participate in numerous clinical trials involving KHSC patients. In addition, Dr. Jeannie Callum received the Canadian Blood Services Lifetime Achievement Award in recognition of her significant contributions to the field of transfusion medicine.

National Inherited Bleeding Disorder Genotype Laboratory (NIBDGL):



2025 saw the 25-year anniversary of the establishment of the NIBDGL in the DPMM. This laboratory is a national reference diagnostic laboratory that receives samples from all 26 Canadian Comprehensive Care Hemophilia Centers and from genetic groups across the country. The facility is currently supported by funds from the Association of Hemophilia Clinic Directors of Canada and is located on the 4th floor of the Richardson Laboratory Building. In 2025, the laboratory received 482 requests for diagnostic genetic testing – Hemophilia A (231); Hemophilia B (51); von Willebrand Disease (117), and Rare Bleeding Disorders (83).

Two DPMM members (Drs Quest and Lillicrap) are members of the recently established Inherited Non-Malignant Hematology Expert Panel of the Ontario Provincial Genetics Program, the body that, in 2026, will develop plans for a billing schedule for diagnostic testing of inherited bleeding patients in Ontario. Also in 2026, the NIBDGL will embark on its long-awaited transition to NGS screening for a significant proportion of its referred-in cases.

Lastly, in January 2026, the laboratory is scheduled for its second renewal review by Accreditation Canada Diagnostics. Our next full accreditation review will be in 2030.

Clinical Biochemistry (Dr. Oleschuk)



In addition to the transition to Lumeo, Clinical Biochemistry and Specimen Management had the task of maintaining high quality laboratory testing with aging Clinical Biochemistry Core automation and analyzers, while also procuring replacement equipment. The Team is excited with the kick start of new analyzer installation in December and expects full transition to new instrumentation by spring 2026. This change involves a significant capital investment, which in addition to the new analyzers includes a new water system and updates to the Core track automation line. The Team is thankful for all the support provided at KHSC in moving this project along.

Another significant investment has been the replacement of centrifuges not on the automated system, which can help minimize the impact of automation downtime.

Congratulations to Dr. Kirk Leifso, Dr. Curtis Oleschuk, Dr. Prameet Sheth, Dr. Yun Huang and Dr. David Good on YGKHC funding to implement and validate procalcitonin testing in assessment of febrile infants. This change is expected to reduce the frequency of lumbar punctures required for infants in the ED.

The Team looks forward to transitioning to 2026 as it will include the new Core analyzer implementation and onsite Accreditation Canada inspection in the new year.

Microbiology (Dr. Sheth)



2025 has been a year punctuated by change and improvement for the Division of Microbiology at Kingston Health Sciences Center. Early in 2025, the first front-end automation was introduced in Microbiology that has led to improved processing times and improved workflow, as well as allowing for greater standardization. The Division also validated and brought on-line a new Mass Spectrometer for bacterial identification and new Blood Culture Instruments - that all had to be validated and brought on-line. The new technology and front-end processing will enable the expansion of Microbiology services moving forward.

Molecular Microbiology developed and deployed a laboratory-developed PCR for the diagnosis of *Pneumocystis jirovecii* pneumonia (PJP), finally moving away from the less sensitive and often cumbersome microscopy based-method. This introduction has already led to improved detection and diagnosis of critically ill patients at KHSC.

Infectious Disease Sequencing (IDS) continued to be a cornerstone for COVID-19 genomics for the province of Ontario and reporting >1900 full SARS-CoV-2 genomes for provincial surveillance in 2025. The team has also been busy developing new genomics assays for key respiratory viruses including Influenza and RSV that we hope to implement in the next year as part of the provincial initiative to expand Genomics for pathogens. The IDS lab continues to be a leader in the field of Genomics.

2025 also saw a major turnover in personnel in the division with the arrival of a new manager Ms. Terri Lewis, the retirement of our long-time leader and Service Chief, Dr. Lewis Tomalty and the arrival of our newest Microbiologist Dr. Ellen Avery.

Clinical Genomics (Dr. Berman)

2025 was a year of substantial change and accomplishment for the Division. In October, I stepped into the role of interim Service Chief of Clinical Genomics following Dr. Susan Crocker's departure for Nova Scotia. Throughout this transition, I was very well supported by an expanded leadership team, including Drs. David Good, Graeme Quest, Calvin Sjaarda, and Henry Wong, along with Sherri Wilson, Tammy Edwards, Karen Persad, Kate Aliston, and Cassandra Sims. Working with this group helped me better understand and appreciate the depth and breadth of clinical genomics at our centre.



The year also brought several personnel changes. Dr. Jila Dastan joined in February and provided excellent, patient-focused expertise in cytogenetics before departing at year's end. In December, we had the opportunity to recognize Dr. Crocker's many contributions and wish her well in her new role. Despite these transitions, the division's thirty technical, administrative, scientific, and clinical team members met the year's challenges with energy and resilience, expanding laboratory capabilities, introducing new assays and technologies, and strengthening our group of expert directors.

A highlight was our participation in an educational initiative to bring practicing surgical pathologists into the clinical genetics lab. In June, we hosted Dr. Mario Gomes from The Ottawa Hospital and joined his program to train pathologists in interpretation of solid tumour mutations, copy number changes, and gene fusions. Dr. Tao Wang was our first participant and, with guidance from Dr. Bob Argiropoulos and Dr. Harriet Feilotter, quickly developed into a local expert.

The division also made major advances in its testing portfolio. Through collaborations across KHSC, Queen's University, the Centre for Health Innovation, QLMP, the Canadian Cancer Trials Group, OICR, and Princess Margaret Hospital, we helped initiate clinical-grade whole-genome sequencing (WGS) within the Marathon of Hope Comprehensive Cancer Network (MOHCCN). Key contributors included Dr. Amber Simpson and her teams at the Centre for Health Innovation (Leone Ploeg, Fiona Robb-Craig) and Oncology (Stephanie Willing, Julie Holiday), the QLMP team led by Dr. Kyster Nanan (Nick Xiao, Stephanie McCormick, Bill Yuexin Wang, Shakeel Virk), and administrative leaders, Drs. Lillian Siu, Renate Ilse, Cindy Draycott, Janet Dancey, and Steven Smith.

This work enabled the KHSC Clinical Genetics Laboratory to join Ontario's Provincial Genetics Laboratory Network (PGLN) as one of five centres providing WGS and clinical interpretation. With guidance from Dr. Lucas Bronicki, we also launched WGS testing for inherited cardiac diseases and upgraded sequencing capacity to the Illumina X-Plus platform. With these foundations in place, we are well positioned for continued growth in clinical genomics in 2026.

Queen's Laboratory for Molecular Pathology (QLMP) and the Canadian Cancer Trials Group Tumour Tissue Data Repository (TTDR) (Mr. Virk and Dr. Nanan)



In 2025, the Queen's Laboratory for Molecular Pathology (QLMP) and the Canadian Cancer Trials Group Tumour Tissue Data Repository (TTDR) completed a major transition to newly renovated space in the Kingston General Hospital Research Institute on Watkins 1. Previously, operations were spread across multiple locations, limiting efficiency, storage capacity, and expansion of molecular and digital pathology services. The new integrated facility provides purpose-built infrastructure for translational research and clinical trial biospecimen

management, including an expanded biobank with increased -80°C capacity, dedicated lab space, improved accessioning and kit assembly areas, and enhanced tracking systems.

In 2025, the teams processed over 10,000 biospecimens, scanned more than 5,000 histology slides, supported over 20 Queen's researchers, and contributed to 47+ clinical trials. The facility enables growth while maintaining rigorous quality control and standardized handling for multi-centre studies. It also supports expanded capabilities in digital pathology, immunohistochemistry and multiplex immunofluorescence, tissue microarrays, nucleic acid extraction, and genomics workflows—strengthening our ability to support biomarker-driven trials, precision oncology, and collaborations with academic and industry partners.

QLMP Genomics also reached key milestones. Through the Marathon of Hope Cancer Centres Network (MOHCCN), led locally by Dr. Amber Simpson, the lab sequenced transcriptomes and matched germline and tumour genomes for 44 cases—more than double the previous year—with further growth expected. A major advance was the implementation of sequencing workflows from FFPE tissue, led by Stephanie McCormack and Nick Zhang, with additional refinement through training at the OICR Translational Genomics Laboratory. Cases underwent rigorous quality review, supported by Drs. Tim Childs, John Rossiter, Andrea Grin, Ami Wang, David Berman, Tricia Cottrell, and Amira Othman, who collectively reviewed 182 cases, and coordinated by Allison Harding, Dr. Jean-Francois. Pare joined as a Research Associate to support increasing volumes, while computational capacity was expanded in collaboration with Drs. Amber Simpson, Calvin Sjaarda, and Hamid Ghaedi. All sequencing was performed on the NovaSeq 6000, with plans underway with KHSC to transition to the NovaSeq X Plus. The Department also maintained participation in the Ontario Joint Genomics Program (OJGP), coordinated by OICR, supporting standardized, high-quality genomic sequencing across the province.

Digital Pathology (Dr. Varma)



This year, we conducted a comprehensive evaluation of digital pathology technologies, including vendor demonstrations of whole-slide scanners and image management systems (IMS). Multiple site visits to peer and leading academic centres, including University Health Network (UHN) and Sunnybrook Health Sciences Centre, along with strategic discussions with Grand River Hospital and Mackenzie Health, have informed our understanding of implementation models, operational workflows, governance, and lessons learned across the digital pathology journey. In parallel, enterprise-level assessments of data storage, security, and interoperability with Lumeo/Oracle are underway to ensure alignment with KHSC's broader digital and clinical information strategy. This phased, risk-informed due diligence process will continue, positioning our department to initiate its digital pathology transformation by mid-next year to ensure robust patient care, diagnostic quality, operational efficiency, and future innovation.

Educational Contributions

Undergraduate Education

2025 has seen some sad farewells to long-time contributors to Undergraduate Education, and DPMM feels the loss of Drs. Harriet Feilotter (Cancer Research Project Course, Canc499), Scott Davey (Cancer Biology, Canc440), and Susan Crocker (Human Genetics, Path425), who contributed so much to our teaching over many years. Nevertheless, we have been fortunate to welcome the expertise of Dr. Hamad Ghaedi, who has ably taken on coordinating Path425 this year. The Department is also grateful to Dr. Lois Mulligan and Dr. Peter Greer for agreeing to take on interim coordinating roles that ensure two of our upper-year winter courses are available to interested students, while the department identifies more long-term replacements.

Despite these changes, Undergraduate Education in DPMM continues to expand and increase its impact through our contributions to LifeSciences & Biochemistry and Health Sciences Programs, and beyond. These Programs have significantly increased in enrolments consistently year over year. In response, DPMM continues to expand capacity in our first year courses in Data Visualization, Path111 (Dr. Kathrin Tyryshkin) and Human Disease, Path120 (Dr. Cynthia Pruss), that is further increasing interest in our highly sought after upper year online and blended courses in the areas of Cancer Biology, Canc440 (Dr. Peter Greer), Data Science, Path411 (Dr. Kathrin Tyryshkin), Human Genetics, Path425 (Dr. Hamad Ghaedi), Pathology & Molecular Medicine, Path310 Online & Blended (Drs. Cynthia Pruss & Chris Nicol), Clinical Chemistry, Path381 Online & Blended (Dr. Curtis Oleschuk) and the Molecular Basis of Disease (Dr. David Lillicrap).

In addition, under direction of Dr. Xiaolong Yang, our combined Cancer and Pathology (Canc/Path499) Research Project courses within the LifeSciences & Biochemistry Program have reached record numbers of 4th year undergraduate students engaged in a variety of cutting-edge projects across DPMM, KHSC and SCRI. Dr. Mulligan has graciously agreed to fill in as coordinator for these research project students during the winter 2026 term while Dr. Yang is on sabbatical. We have also contributed to record numbers of BHSC research student projects and to the new Discovery Lab Team-Based Research Projects (Disc598/599), led by Dr. Chris Nicol. Importantly, despite the anxiety and frustration for our undergraduate and graduate students associated with extended labor actions in the last winter term, our students continue to thrive, with many of our senior research students progressing to further education in medicine or graduate programs, building on what they learned in DPMM.

Finally, looking to the future, the heavy lifting has begun on a phased transition in the LifeSciences & Biochemistry and Health Sciences Programs in order to address feedback from Faculty and students identified during the recently completed QuQAPs Accreditation Review. In the coming year, information and consultation will occur with all depts. and faculty to ensure the changes made will address concerns, improve alignment across all Research Project courses, integrate assessments and deliverables regardless of sub plan or stream of study, and clarify expectations for students and their research project supervisors. Watch here for updates!

Graduate Education

Calendar year 2025 was a busy year for the DPMM graduate program. Through our seminar series, we hosted 9 stellar visiting speakers with support from the Nathan Kaufmann Fund, including Drs. Daniela Quail, Juri Reimand, Logan Walsh, Mathieu Quesnel-Vallieres, Daniel Schramek, Blair Gage, Claudia Kleinman, Costin Antonescu, and Robert Vanner. We also heard from 17 of our 37 graduate students. Thanks to student rep Danielle Harper, these talks were recorded and are available on the departmental website.

Ten new students joined the graduate program in 2025. Four MSc students progressed into the PhD program through the Mini-Masters process, 4 students completed their PhD comprehensives, 3 students defended their MSc theses, and 4 defended their PhD theses.

Our graduate students authored 37 publications, including 16 first-author, and presented their work at more than 33 conferences in 2025. Their successes were also recognized by 4 national, 4 provincial and 21 internal fellowship awards.

Postgraduate Education

The Diagnostic and Molecular Pathology Residency Program at Queen's University has had a year marked by significant achievements and growth. We proudly congratulate Drs. Andrew Mazurek, Teodora Popa, Teaghan Koster, and Shalon Liu on their graduation, and extend congratulations to Dr. Abdulhameed Abdulhamed for successfully passing his Royal College examinations. The program's quality, camaraderie and leadership garnered great interest among residency applicants, with 73 applications leading to 36 panel interviews and yielding spectacular results. We were also delighted to welcome Drs. Avery Newman-Simmons, Darya Ali, and Kelly Brennan as incoming PGY1 residents. In recognition of the program's continued excellence and commitment to resident education, the program was nominated for PARO's Outstanding Program Award, highlighting the collective efforts of our trainees, faculty, and administrative team.

Alongside these milestones, several initiatives were implemented to strengthen training, transparency, and resident well-being. Comprehensive rotation outlines were created, PGY3 residents transitioned into senior resident roles, and a new CC Resident Summary Template was developed to enhance clarity and transparency in Competency Committee decisions. Residents connected during a successful resident retreat at Bob's Lake, fostering collegiality and reflection. The program also prioritized safety with increased measures in the junior resident room, including the installation of a doorway camera and additional hallway mirrors. All of these efforts have been undertaken in parallel with focused preparation for upcoming accreditation, positioning the program strongly for continued success.



Our education team leads (R – L): Drs. L. Mulligan, C. Nicol, P. Greer, and C. Orr

Research Contributions

To review **Research Funding Highlights and Publications**, please see pages 10–28.

BRAID (Blood Research And Innovation Dynamic):

The Department of Pathology and Molecular Medicine (DPMM) plays a major role in the leadership of the BRAID Research Excellence Cluster (REC). The two co-directors of BRAID are Drs Callum and Lillicrap, Dr. Rauh is a BRAID principal investigator, and Drs Good and Quest are co-investigators.

The principal aims of the BRAID REC are to foster collaborative research initiatives, disseminate knowledge of local blood-related studies, and to promote the advancement of early career investigators with an interest in blood science.



The BRAID investigators and their teams have met at ~4 monthly intervals during the past year to hear presentations from one of the BRAID groups about their recent research achievements. In addition, on October 7th, 2025, BRAID held its first half-day research retreat at the Donald Gordon Conference Center. The event featured a Keynote Lecture from Dr. Michelle Sholzberg from St. Michael's Hospital in Toronto and highlighted projects from trainees mentored by each of the seven BRAID principal investigators. This event was generously supported by funds from the DPMM.

Recognitions and Appointments

1. Dr. Tao Wang was promoted to Associate Professor effective July 1, 2025.
2. Dr. Jeannie Callum received the Canadian Blood Services Lifetime Achievement Award.
3. Welcome to our new faculty and staff who joined our department in 2025:
 - Dr. Tony Yeung, Hematopathologist
 - Dr. Ellen Avery, Microbiologist
 - Mr. Keyur Dixit, Manager, Pathology, Cytology, Autopsy and MOHS Clinic
 - Mr. Marc Robichaud, Clinical Laboratories Business Manager
 - Mrs. Angela Prunner, Administrative Assistant
 - Mrs. Nicole Archer, Facilities and Research Administrator
 - Ms. Amber Sarazin, Departmental and Academic Administrator
4. Welcome to our new residents and graduate students:
 - Residents: Drs. Avery Newman-Simmons & Darya Ali
 - Graduate Students: Anthony Guglya, Maria Avgeropoulos, Sephera Chou, Allison Harding, Fatin Mustafa, Victoria Lewtas, Emilie Richard, & Taylor Zhang

Retirements & Resignations

- Dr. Lewis Tomalty
- Dr. Patricia Farmer
- Dr. Scott Davey
- Dr. Kevin Ren
- Dr. Susan Crocker
- Dr. Jila Dastan

Service Milestones

- Dr. Christopher Davidson celebrated 15 years at KHSC in October.
- Dr. David Lillicrap celebrated 40 years at KHSC in October.

Looking Ahead

Our focus for 2026 includes:

- Recruiting faculty into new and existing open positions
- Building and integrating programs in genomics, genetics, and data science
- Advancing digital workflows and AI in education, research, and diagnosis
- Expanding team research initiatives



Funding Highlights

Canadian Institutes of Health Research (2025-2030) - \$1,197,227.

RATIONAL (Role of Antibiotic Therapy or Immunoglobulin On iNfection in hAematoLogy) Platform Trial: An RCT of continuing immunoglobulin therapy, or stopping with or without prophylactic antibiotics, on infection rate in patients with acquired hypogammaglobulinemia secondary to haematological malignancies. NPI: **Callum JL**. Co-I: Reiman T, Arnold, DM; Cameron, D; Chapdelaine, H; Chen, BE; Cheung, MC; Cowan, J; Daneman, N; Hay, A; Heath, A; Lancman, G; Pendergrast, JM; Rivera Duarte, A.

Canadian Institutes of Health Research (2025-2029) – \$1,193,400.

Platelet Transfusion Domain of the Canadian Critical Care Comparative Effectiveness. PI: Lamontagne F. PA: Adhikari, NK; Arnold, DM; **Callum, JL**; Fowler, RA; Menon, K; Tsang, JL; Co-I: Bagshaw, SM; BeaubienSouligny, W; Burns, KE; Carrier, FM; Chasse, M; Cook, DJ; Cook, RJ; Cumyn, A; D'aragon, F; Doidge, J; English, SW; Ferguson, ND; Fernando, SM; Granholm, A; Guyatt, GH; Honarmand, K; Hylands, M; Jivraj, N; Kho, ME; Laupacis, A; Lauzier, F; Lawler, PR; Lin, Y; Mason, A; Mcintyre, LA; McNally, JD; Mehta, S; Moeller, MH; Morin, P; Mouncey, P; Nahirniak, SN; Ong, SW; Perner, A; Pinto, R; Robitaille, N; Rochweg, BN; Seely, AJ; ShankarHari, M; Sibley, S; Slessarev, M; Stanworth, S; Thabane, L; Turgeon, AF; Watkinson, PJ; Webert, KE; Yada, N; Yarnell, CJ; Zarychanski, R.

US National Institutes of Health (NHLBI) (2025-2026) - US\$280,000/yr

Investigation of factors regulating von Willebrand factor expression. PI: **Lillicrap, D**

CRS Operating Grant (2025-2027) - \$125,000.

A direct role of cancer histone mutations in disrupting genome integrity. PI: Aristizabal, M; Co-PI: **Panchenko A.**

QHS QSMART REC Funding Support (2025-2026) - \$5,000

Co-Lead: Rudan J, **Nicol, C.**

Ontario Institute for Cancer Research (OICR) (2025-2026) - \$248,688.

Cancer Therapeutics Innovation Pipeline Funding Opportunity: Selection of guanine quadruplex binders for the RET promoter, towards novel therapeutics for RET-receptor associated cancers. PIs: Petitjean, A, **Mulligan, L.**

Southeastern Ontario Academic Medical Organization AFP Innovation Research Fund (2025) - \$150,000.

Integrative Metabolomic and Pathological Characterization for Precision-based Rectal Cancer Management. PI: **Hurlbut David J.**

Canadian Hemophilia Society, Research Grant (2025) - \$150,000.

Evaluation and Mitigation of Cellular Stress associated with FVIII Gene Therapy. PI: **Lillicrap David P.**

Heart & Stroke Foundation, Clinical Trial (2025) - \$267,761.

POAM: Post-operative intravenous iron to treat iron-deficiency anemia in patients undergoing cardiac surgery: A pilot, multi-centre, placebo-controlled randomized trial. PI: **Callum JL.**

Publication Highlights

1. [Platelet Transfusion: 2025 AABB and ICTMG International Clinical Practice Guidelines.](#)
 Metcalf RA, Nahirniak S, Guyatt G, Bathla A, White SK, Al-Riyami AZ, Jug RC, La Rocca U, **Callum JL**, Cohn CS, DeAnda A, DeSimone RA, Dubon A, Estcourt LJ, Filipescu DC, Fung MK, Goel R, Hess AS, Hume HA, Kaufman RM, Kranke P, Louw VJ, Møller MH, Murphy MF, Muszynski JA, O'Kelly CJ, Pagano MB, Patidar GK, Pavenski K, Poston JN, Saifee NH, Stolla M, Szczepiorkowski ZM, Tobian AAR, Uberoi R, Waters J, Williams B, Wood EM, Zantek ND, Zeller MP, Grossman BJ, Stanworth SJ.
JAMA. 2025 Aug 19;334(7):606-617. doi: 10.1001/jama.2025.7529.
 PMID: 40440268

2. [Prothrombin Complex Concentrate vs Frozen Plasma for Coagulopathic Bleeding in Cardiac Surgery: The FARES-II Multicenter Randomized Clinical Trial.](#)
 Karkouti K, **Callum JL**, Bartoszko J, Tanaka KA, Knaub S, Brar S, Ghadimi K, Rochon A, Mullane D, Couture EJ, Lin Y, Harle C, Zeller M, Tran DTT, Solomon C, Rao V, Law M, Butt AL, Chen EP, Martins MR, Saha T, Shih AW, Vézina MC, Moussa F, Pereira Cezar Zamper R, Syed S, Buyukdere H, Werner S, Grewal D, Wong D, Vandyck KB, Tanzola R, Hughes B, Royer O, Wong S, Levy JH; FARES-II Study Group.
JAMA. 2025 May 27;333(20):1781-1792. doi: 10.1001/jama.2025.3501.
 PMID: 40156829

3. [Red Cell Transfusion in Acute Myocardial Infarction: AABB International Clinical Practice Guidelines.](#)
 Pagano MB, Stanworth SJ, Dennis J, Bakhtary S, **Callum J**, Carson JL, Cohn CS, Dubon A, Grossman BJ, Gupta GK, Hess AS, Jacobson JL, Kaplan LJ, Karkouti K, Lin Y, Metcalf RA, Miles LF, Mills NL, Murphy CH, Pavenski K, Prochaska MT, Raval JS, Salazar E, Saifee NH, Shah K, Steg PG, Tobian AAR, So-Osman C, Walsh T, Waters J, Wood EM, Zantek ND, Guyatt GH.
Ann Intern Med. 2025 Oct;178(10):1469-1477. doi: 10.7326/ANNALS-25-00706. Epub 2025 Aug 19.
 PMID: 40825204

4. [Clonal Hematopoiesis of Indeterminate Potential and Progression of CKD.](#) Vlasschaert C, Pan Y, Chen J, Akwo E, Rao V, Hixson JE, Chong M, Uddin MM, Yu Z, Jiang M, Peng F, Cao S, Wang Y, Kim DK, Hung AM, He J, Tamura MK, Cohen DL, He J, Li C, Bhat Z, Rao P, Xie D, Bick AG, Kestenbaum B, Paré G, **Rauh MJ**, Levin A, Natarajan P, Lash JP, Zhang MZ, Harris RC Jr, Robinson-Cohen C, Lanktree MB, Kelly TN; Chronic Renal Insufficiency Cohort (CRIC) Study Investigators.
J Am Soc Nephrol. 2025 Apr 9;36(9):1764-1774. doi: 10.1681/ASN.0000000680. PMID: 40202794

5. [Society for Immunotherapy of Cancer \(SITC\) consensus statement on essential biomarkers for immunotherapy clinical protocols.](#)
Cottrell TR, Lotze MT, Ali A, Bifulco CB, Capitini CM, Chow LQM, Cillo AR, Collyar D, Cope L, Deutsch JS, Dubrovsky G, Gnjatic S, Goh D, Halabi S, Kohanbash G, Maecker HT, Maleki Vareki S, Mullin S, Seliger B, Taube J, Vos W, Yeong J, Anderson KG, Bruno TC, Chiuhan C, Diaz-Padilla I, Garrett-Mayer E, Glitza Oliva IC, Grandi P, Hill EG, Hobbs BP, Najjar YG, Pettit Nassi P, Simons VH, Subudhi SK, Sullivan RJ, Takimoto CH.
J Immunother Cancer. 2025 Mar 7;13(3):e010928. doi: 10.1136/jitc-2024-010928. PMID: 40054999

6. [TET2-mutant myeloid cells mitigate Alzheimer's disease progression via CNS infiltration and enhanced phagocytosis in mice.](#)
 Matatall KA, Wathan TK, Nguyen M, Chen H, McDonald A, Qi G, Belk JA, Florez MA, Le DT, Olarinde T, Vlasschaert C, Buttigieg MM, Fan CW, Carcamo S, Cao R, Kennedy DE 2nd, Maknojia AA, Thatavarty A, Fernandez Sanchez JV, Bouzid H, Veeraragavan S, Crocker S, Goodell MA, Rodriguez A, Jaiswal S, **Rauh MJ**, Papapetrou EP, Marro SG, King KY.
Cell Stem Cell. 2025 Aug 7;32(8):1285-1298.e8. doi: 10.1016/j.stem.2025.06.006. Epub 2025 Jul 2. PMID: 40609533

7. [International Society of Urological Pathology Consensus on Cancer Precursor Lesions. Working Group 1: The Prostate.](#)
 Iczkowski KA, De Marzo AM, Agarwal N, **Berman DM**, Cimadamore A, Fine SW, Greenland N, Khani F, Loda M, Lotan TL, Varma M, Chinnaiyan A, Giannarini G, Huang J, Montironi R, Netto GJ, Osunkoya AO, Ratliff T, Kristiansen G, Cheng L, van Leenders GJLH; Members of the ISUP GU Cancer Precursor Consensus Panel.
Am J Surg Pathol. 2025 Dec 1;49(12):e33-e45. doi: 10.1097/PAS.0000000000002430. Epub 2025 Jun 23. PMID: 40545966

8. [Mild or moderate hemophilia is not always a mild or moderate bleeding disorder: Back to the clinical phenotype.](#)
 Rodeghiero F, Ghiotto L, Pontalto L, Casini A, Castaman G, Abdul-Kadir R, Berntorp E, Bodó I, Degenaar-Dujardin M, Fijnvandraat K, Gresele P, Key NS, Lassila R, Leebeek FWG, **Lillicrap D**, Makris M, Meijer S, Mezzano D, Noris P, Pabinger I, Ragni MV, Silva D, Srivastava A, Tosetto A, Windyga J, Zieger B. *Hemasphere.* 2025 Mar 25;9(3):e70111. doi: 10.1002/hem3.70111. eCollection 2025 Mar. PMID: 40134524

9. [Inflammatory reprogramming of the solid tumor microenvironment by infiltrating clonal hematopoiesis is associated with adverse outcomes.](#)
 Buttigieg MM, Vlasschaert C, Bick AG, Vanner RJ, **Rauh MJ**.
Cell Rep Med. 2025 Mar 18;6(3):101989. doi: 10.1016/j.xcrm.2025.101989. Epub 2025 Mar 3. PMID: 40037357

10. [New Horizons in Transfusion Medicine.](#) Dzik S, **Callum J**, McQuilten Z.
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