CURRICULUM VITAE

I. PERSONAL INFORMATION:

SUN, Louise, MD, SM, FRCPC, FAHA

300 Pasteur Dr, Rm H3584B, Palo Alto, CA 94305

Phone: 650-497-5513 Email: sunl@stanford.edu

II. EDUCATION AND CREDENTIALS:

Degrees:

Nov 2014	Clinical and Research Fellow Cardiac Anesthesiology, Toronto General Hospital, Canada, Ontario
Jun 2013	Residency Anesthesiology, University of Ottawa, Canada, Ontario
May 2013	Master of Science (SM) Clinical Epidemiology, Harvard University, United States, Massachusetts
Jun 2008	Doctor of Medicine, McMaster University, Canada, Ontario
May 2005	Bachelor of Science in Biomedical Engineering, University of Guelph, Canada, Ontario

Credentials:

Diplomate, Advanced Perioperative Transesophageal Echocardiography, National Board of Echocardiography, Jan 2016 Testimur, Advanced Perioperative Transesophageal Echocardiography, National Board of Echocardiography, Jul 2014 Fellow, Royal College of Physicians and Surgeons of Canada, Ontario, Jun 2013

Certificate of Independent Practice, College of Physicians and Surgeons of Ontario, Jun 2013

Licentiate, Medical Council of Canada, Ontario, Nov 2009

III. PROFESSIONAL APPOINTMENTS:

Academic Work Experience:

- Dec 2022 Professor, Department of Anesthesiology, Perioperative and Pain Medicine, Stanford University School of Medicine, U.S.A., Palo Alto
- Oct 2022 Chief, Division of Cardiothoracic Anesthesiology, Department of Anesthesiology, Perioperative and Pain Medicine, Stanford University School of Medicine, U.S.A., Palo Alto
- May 2020 Associate Professor, Department of Anesthesiology and Pain Medicine, University of Ottawa, Canada, Ontario
- May 2020 Associate Professor, School of Epidemiology and Public Health, University of Ottawa, Canada, Ontario
- Jan 2019 Director, Big Data and Health Bioinformatics Research, University of Ottawa Heart Institute at the Ottawa Civic Hospital, Canada, Ontario
- Jan 2019 Clinician Scientist, University of Ottawa Heart Institute Research Corporation, University of Ottawa Heart Institute at the Ottawa Civic Hospital, Canada, Ontario
- Mar 2016 Adjunct Scientist, Cardiovascular Research Program, Institute for Clinical Evaluative Sciences, Canada, Ontario
- 2016 2020 Assistant Professor, School of Epidemiology and Public Health, University of Ottawa, Canada, Ontario
- 2015 2018 Clinician Investigator, Ottawa Heart Institute Research Corporation, Ottawa Heart Institute Research Corporation, University of Ottawa Heart Institute at the Ottawa Civic Hospital
- 2015 2020 Assistant Professor, Department of Anesthesiology and Pain Medicine, University of Ottawa, Canada, Ontario

University Appointments:

May 2016 - Cross, Medicine, Clinical Epidemiology

Jan 2015 – Primary, Medicine, Anesthesiology

Hospital Privileges:

Jan 2015 – Attending Staff, University of Ottawa Heart Institute at the Ottawa Civic Hospital, Canada, Ontario

IV. HONOURS AND AWARDS:

2022	Ontario Ministry of Health Innovation Award for managing surgical waitlists during COVID-19
	4 National New Investigator Award, Heart and Stroke Foundation of Canada (declined due to COVID-19)
2020 - 2023	5 Tier 2 Clinical Research Chair in Big Data and Cardiovascular Outcomes, University of Ottawa
2020	COVID-19 Recognition Award for Exceptional Productivity and Clinical Operations, University of Ottawa
2020	Top 10% of reviewers for Anesthesiology (Journal) in 2019
2019	Dr. Robert Roberts Award for Research Excellence, University of Ottawa Heart Institute
2019	Fellow of the American Heart Association (FAHA)
2019	Junior Faculty Excellence Award, University of Ottawa
2019	Designated as a top reviewer for the Annals of Internal Medicine in 2018
2018	Vivien Thomas Young Investigator Award Finalist, American Heart Association
2018	Top 3 most-cited papers in Anesthesiology in 2017, "Association of Intraoperative Hypotension with Acute
	Kidney Injury after Elective Noncardiac Surgery", Anesthesiology
2017	Top 20 cited articles in Anesthesiology in 2016, "Association of Intraoperative Hypotension with Acute
	Kidney Injury after Elective Noncardiac Surgery", Anesthesiology
2016	Designated as one of the top reviewers for the Annals of Internal Medicine in 2015
2013	Finalist, Residents' Competition, Selected as one of the top six resident abstracts at the Canadian
	Anesthesiologists' Society Meeting, Canadian Anesthesiologists' Society
2012	Second Prize, Residents Competition, Canadian Anesthesiologists' Society
2012	Best research oral presentation, Department of Anesthesiology, University of Ottawa, Canada, Ontario

V. SCHOLARLY PUBLICATIONS:

2012

Summary count according to the following categories:

Peer-reviewed publications: original investigation	72
Peer-reviewed publications: other	
Book chapters	
Books	
Reports	
Encyclopedia entries	2
Abstracts in refereed conference proceedings	35
Patents	
Others	

Top Oral Research Presentation Award, University of Ottawa Heart Institute, Canada, Ontario

Peer-Reviewed Publications: Original Investigation

- 1. Dafaalla M, Abdel-Qadir H, Gale CP, **Sun LY**, López-Fernández T, Miller RJH, Wojakowski W, Nolan J, Rashid M, Mamas MA. (2023). Outcomes of ST elevation myocardial infarction in patients with cancer; a nationwide study. *Eur Heart J Qual Care Clin Outcomes. gcad012*.
- Sun LY, Anna Chu, Derrick Y. Tam, Xuesong Wang, Jiming Fang, Peter C. Austin, Christopher M. Feindel, Vicki Alexopoulos, Natasa Tusevljak, Rodolfo Rocha, Maral Ouzounian, Graham Woodward, Douglas S. Lee. (2023). Derivation and validation of predictive indices for cardiac readmission after coronary and valvular surgery – A multicenter study. *American Heart Journal Plus: Cardiology Research and Practice, 100285, ISSN* 2666-6022
- 3. Kobo O, Abramov D, Davies S, Ahmed SB, **Sun LY**, Mieres JH, Parwani P, Siudak Z, Van Spall HGC, Mamas MA. (2022). CKD-Associated Cardiovascular Mortality in the United States: Temporal Trends From 1999 to 2020. *Kidney Med.*;5(3):100597.
- 4. Rubens FD, Clarke AE, Lee DS, Wells GA, **Sun LY**. (2022). Population Study of Sex-Based Outcomes After Surgical Aortic Valve Replacement. *CJC Open.*;5(3):220-229.
- 5. Rahmouni El Idrissi K, Nantsios A, Wharmby G, Sun LY, Issa HM, Kandolin R, Messika-Zeitoun D, Glineur D, Ruel M, Mesana T. (2022). Pulmonary Artery Pulsatility Index Predicts Intermediate Survival Following Mitral Valve Repair. *Open Heart. In press*.
- 6. Mai AS, Matetic A, Elgendy IY, Mattei JL, Kotronias RA, **Sun LY**, Yong JH, Bagur R, van Spall H, Mamas MA. (2022). The Association Between Cancer Diagnosis, Care, and Outcomes in 1 Million Patients Hospitalized for Acute Pulmonary Embolism. *International Journal of Cardiology. Online first*.
- 7. **Sun LY,** Zghebi SS, Bader Eddeen A, Liu PP, Lee DS, Tu K, Tobe SW, Kontopantelis E, Mamas MA. (2022). Derivation and external validation of a clinical model to predict heart failure onset in patients with incident diabetes. *Diabetes Care*. 45(11):2737-2745.
- 8. Kobo O, Moledina SM, Mohamed MO, Sinnarajah A, Simon J, **Sun LY**, Bond RM, Slawnych M, Fischman DL, Roguin A, Mamas MA. (2022). Palliative Care Use in Patients with Acute Myocardial Infarction and Do-Not-Resuscitate Status (From a nationwide inpatient cohort). *Mayo Clinic Proceedings*. S0025-6196(22)00514-6.
- 9. Raisi-Estabragh Z, Kobo O, Elbadawi A, Velagapudi P, Sharma G, Bullock-Palmer R, Petersen SE, Mehta LS, Ullah W, Roguin A, **Sun LY**, Mamas MA. (2022). Differential patterns and outcomes of over 20.6 million cardiovascular emergency department encounters for men and women in the USA. *JAHA*. *Sept 8:e026432*.
- 10. Fottinger A, Bader Eddeen A, Lee DS, Woodward G, **Sun LY.** (2022). Derivation and validation of pragmatic clinical models to predict hospital length of stay after cardiac surgery in Ontario, Canada. *CMAJ Open.* 11(1):E180-E190.
- 11. Wijeysundera HC, Abdel-Qadir H, Qiu F, Manoragavan R, Austin PC, Kapral MK, Kwong JC, **Sun LY**, Ross HJ, Roifman I, Yu AY, Chu A, McAlister FA, Lee DS, Udell J. (2022). Relationship of Frailty with Excess Mortality during the COVID-19 pandemic: a population-level study in Ontario, Canada. *Aging Clinical and Experimental Research. Online ahead of print*.
- 12. **Sun LY,** Jabagi H, Fang J, Lee DS. (2022). Comparison of Multidimensional Frailty Instruments in the Prediction of Long-Term Patient-Centered Outcomes after Cardiac Surgery. *JAMA Netw Open.* 5(9):e2230959.
- 13. MacMillan YS, Mamas MA, **Sun LY.** (2022). IGFBP7 as a preoperative predictor of congestive acute kidney injury after cardiac surgery. *Open Heart*. 9(1):e002027.
- 14. Stickels CP, Nadarajah R, Gale CP, Jiang H, Sharkey KJ, Gibbison B, Holliman N, Lombardo S, Schewe L, Sommacal M, Sun LY, Weir-McCall J, Cheema K, Rudd JHF, Mamas MA, Erhun F. (2022). Aortic stenosis post-COVID-19: A mathematical model on waiting lists and mortality. *BMJ Open.* 12(6):e059309.
- 15. Chan E, Rooprai J, Rodger J, Visintini S, Rodger N, Philip S, Mielniczuk L, **Sun LY.** (2022). Sex-Based Differences in Referral of Heart Failure Patients to Outpatient Clinics: a Scoping Review. *ESC Heart Failure*. *Online ahead of print*.

- 16. Chu A, Sha BR, Rashid M, Booth GL, Fazli GS, Tu K, **Sun LY**, Abdel-Qadir H, Yu CH, Shin S, Connelly KA, Tobe S, Liu PP, Lee DS. (2022). Trends in glucose testing among individuals without diabetes in Ontario between 2010 and 2017: a population-based cohort study. *CMAJ Open.* 10(3):E772-E780.
- 17. Petrosyan Y, Mesana TG, **Sun LY**. (2022). Prediction of Acute Kidney Injury Risk After Cardiac Surgery: Using a Hybrid Machine Learning Algorithm. *BMC Medical Informatics and Decision Making*. 22(1):137.
- 18. Leir SA, **Sun LY**, Fraser A. (2022). Representation of patient diversity in anesthesia curricular materials. *Can J Anaesth. Online ahead of print*.
- 19. **Sun LY**, Wijeysundera HC, Lee DS, van Diepen S, Ruel M, Bader Eddeen A, Mesana TG. (2022). Derivation and Validation of a Hybrid Machine Learning Model to Predict Death on the Waitlist for Cardiac Surgery. *CMAJ Open.* 10(1):E173-E182.
- 20. He JW, **Sun LY**, Wijeysundera DN, Vogt K, Jones PM. (2022). Patient sex and postoperative outcomes after inpatient intra-abdominal surgery: A population-based retrospective cohort study. *Anesthesiology. Online ahead of print*.
- 21. **Sun LY,** Jones PM, Wijeysundera DN, Mamas MA, Bader Eddeen A, O'Connor J. (2022). Association between handover of anesthesiology care and one-year mortality among adults undergoing cardiac surgery. *JAMA Network Open.* 5(2):e2148161.
- 22. Brown, SA, Sparapani R, Osinski K, Zhang J, Blessing J, Cheng F, Hamid A, Berman G, Lee K, BagheriMohamadiPour M, Castrillon J, Kothari AN, Caraballo P, Noseworthy P, Johnson RH, Hansen K, Sun LY, Crotty B, Cheng YC, Olson J; for the Cardio-Oncology Artificial Intelligence Informatics & Precision (CAIP) Research Team Investigators. (2022). Establishing an interdisciplinary research team for cardio-oncology artificial intelligence informatics precision and health equity. *American Heart Journal Plus.* 13:100094.
- 23. Miranda RN, Qiu F, Manoragavan R, Fremes SE, Lauck SB, **Sun LY**, Tarola C, Tam DY, Mamas MA, Wijeysundera HC. (2022). Drivers and Outcomes of Variation in Surgical versus Transcatheter Aortic Valve Replacement in Ontario, Canada: a population-based study. *Open Heart*. 9(1):e001881.
- 24. Moledina SM, Nolan J, Nakao K, **Sun LY**, Wilton SB, Volgman AS, Gale CP, Mamas MA. (2021). Addressing disparities of care in non-ST-segment elevation myocardial infarction (NSTEMI) patients without standard modifiable risk factors: insights from a nationwide cohort study. *European Journal of Preventive Cardiology*. *Dec* 13:zwab200.
- 25. **Sun LY**, Chu A, Tam DY, Wang X, Fang J, Austin PC, Feindel CM, Oakes GH, Alexopoulos V, Tusevljak N, Ouzounian M, Lee DS, *on behalf of the CorHealth Ontario Cardiac Surgery Risk Adjustment Task Group*. (2021). Derivation and multicenter validation of predictive indices for 30-day mortality after coronary and valvular surgery in Ontario, Canada. *CMAJ*. 193 (46) E1757-E1765.
- 26. Dafaalla M, Rashid M, Sun LY, Quinn T, Timmis A, Wijeysundera H, Bagur R, Michos E, Curzen N, Mamas MA. (2021). Impact of availability of catheter laboratory facilities on management and outcomes of acute myocardial infarction presenting with out of hospital cardiac arrest. *Resuscitation*. S0300-9572(21)00438-X. Online ahead of print.
- 27. McAlister FA, Wang T, Wang X, Chu A, Goodman SG, van Diepen S, Jackevicius CA, Kaul P, Udell J, Ko DT, Kwong JC, Austin PC, Lee DS; CORONA Collaboration. (2021). Statins and SARS-CoV-2 Infection: Results of a Population-Based Prospective Cohort Study of 469 749 Adults From 2 Canadian Provinces. *J Am Heart Assoc. Oct* 23:e022330.
- 28. Kobo O, Moledina SM, Slawnych M, Sinnarajah A, Simon J, Van Spall H, **Sun LY**, Zoccai GB, Roguin A, Mohamed MO, Mamas MA. (2021). Predictors, Treatments and Outcomes of Do-Not-Resuscitate Status in Acute Myocardial Infarction patients (From a Nationwide Inpatient Cohort Study). *American Journal of Cardiology*. 159:8-18.
- 29. Kobo O, Khattak S, Lopex-Mattei J, Van Spall H, Graham M, Cheng R, Osman M, **Sun L**, Ullah W, Fischman D, Mohamed MO, Mamas MA. (2021). Trends in Cardiovascular mortality of cancer patients in the US over two

- decades 1999-2019. Int J Clin Pract. Online ahead of print.
- 30. Moledina SM, Shoaib A, **Sun LY**, Myint PK, Kotronias R, Shah B, Gale CP, Quan H, Bagur R, Mamas MA. (2021). Impact of the admitting ward on care quality and outcomes in non-ST-segment elevation myocardial infarction (NSTEMI): insights from a national registry. *European Heart Journal: Quality of Care and Clinical Outcomes. Sep 4:qcab062. Online ahead of print.*
- 31. **Sun LY**, Bader Eddeen A, Wijeysundera HC, Mamas M, Tam DY, Mesana TG. (2021). Derivation and Validation of a Clinical Model to Predict Death or Cardiac Hospitalizations on the Cardiac Surgery Waitlist. *CMAJ*. 193:E133-40.
- 32. **Sun LY**, Boet S, Chan V, Lee DS, Mesana TG, Bader Eddeen A, Etherington C. (2021). Impact of surgeon and anaesthesiologist sex on patient outcomes after cardiac surgery: a population-based study. *BMJ Open*. *11*(8):*E051192*.
- 33. Ngu JMC, Wharmby GE, Rodger J, Vo TX, Guo MH, Visintini S, Wells GA, Hossain A, Ruel M, Beanlands RS, Liu PP, Boet S, **Sun LY**. (2021). Left Ventricular Function Recovery After Coronary Revascularization and Medical Therapy: A Systematic Review and Meta-Analysis. *F1000 Research*. 10:816.
- 34. Nandiwada S, Islam S, Jentzer JC, Miller PE, Fordyce CB, Lawler P, Alviar C, Sun LY, Dover DC, Lopes RD, Kaul P, van Diepen S. (2021). The Association between Cardiac Intensive Care Unit Mechanical Ventilation Volumes and In-Hospital Mortality. *European Heart Journal: Acute Cardiovascular Care. Jul 19:zuab055. Online ahead of print.*
- 35. Tam DY, Qiu F, Manoragavan R, Fremes S, Hassan A, Ko D, Lauck S, Naimark D, Ouzounian M, Sanders B, Sun LY, Wijeysundera H. (2021). The impact of the COVID-19 pandemic on cardiac procedure waitlist mortality in Ontario, Canada. *Canadian Journal of Cardiology*. S0828-282X(21)00284-1.
- 36. **Sun LY,** Bader Eddeen A, Mesana TG. (2021). Disability-Free Survival after Major Cardiac Surgery in a Population-Based Cohort. *CMAJ Open.* 9(2):*E384-E393*.
- 37. **Sun LY**, Rodger J, Duffett L, Tulloch H, Crean AM, Chong AY, Rubens FD, MacPhee E, Mesana TG, Lee DS, van Diepen S, Beanlands RS, Ruel M, Julien AM, Bilodeau J. (2021). Derivation of Patient-Defined Adverse Cardiovascular and Noncardiovascular Events through a Modified Delphi Process. *JAMA Network Open.* 4(1): e2032095.
- 38. Sunner M, Qiu F, Manoragavan R, Roifman I, Tam DY, Fremes S, Sun LY, Rahal M, Woodward G, Austin PC, Wijeysundera HC. (2021). Predictors of Cumulative Cost for Patients with Severe Aortic Stenosis Referred for SAVR or TAVR: A Population-Based Study in Ontario, Canada. *European Heart Journal Quality of Care and Clinical Outcomes*. 7(3):265-272.
- 39. **Sun LY**, Mielniczuk LM, Liu PP, Beanlands R, Chih S, Davies R, Coutinho T, Lee DS, Austin PC, Bader Eddeen A, Tu JV. (2020). Sex-Specific Temporal Trends in Ambulatory Heart Failure Incidence, Mortality and Hospitalization in Ontario, Canada from 1994-2013: a Population-Based Cohort Study. *BMJ Open*. 10(11):e044126.
- 40. **Sun LY,** Bader Eddeen A, Ruel M, MacPhee E, Mesana TG. (2020). Derivation and Validation of a Clinical Model to Predict Intensive Care Unit Length of Stay after Cardiac Surgery. *JAHA*. 9(21):e017847.
- 41. Etherington E, Deng M, Boet S, Johnston A, Mansour F, Said H, Zheng K, **Sun LY**. (2020). The impact of physician sex/gender on processes of care, and clinical outcomes in cardiac operative care: A systematic review. *BMJ Open.* 10(9):e037139.
- 42. Tam DY, Dharma C, Rocha R, Farkouh M, Abdel-Qadir H, Sun LY, Wijeysundera H, Austin P, Udell J, Gaudino M, Fremes S, Lee DS. (2020). Improved long-term survival with coronary artery bypass grafting compared to percutaneous coronary intervention in diabetics. *J Am Coll Cardiol*. 76(10):1153-1164.
- 43. Mamas MA, Brown SA, **Sun LY**. (2020). Coronary Artery Disease in Cancer patients; It's always the small pieces that make the bigger picture. *Mayo Clinic Proceedings*. 95(9):1819-1821.
- 44. Mohamed W, Mohamed MO, Hirji S, Ouzounian M, Sun LY, Percy E, Mamas MA. (2020). Trends in Sex-based

- Differences in Outcomes following Coronary Artery Bypass Grafting in the United States between 2004 and 2015. *International Journal of Cardiology.* S0167-5273(20)33487-2.
- 45. Boet S, Katznelson R, Castellucci L, Booth R, Gonevski M, Soibelman F, Clarke H, Etherington N, Burns J, Gagné S, Djaiani G, Moffett S, Pollock NW, Proulx L, **Sun LY**, Thavorn K, Wherrett C, Thompson C, Blatteau JE, Louge P, Pignel R, Roth V, MacDonald J, Taljaard M. (2020). Multicentre randomized controlled trial of hyperbaric versus normobaric oxygen therapy for COVID-19 patients. *medRxiv*. Access at: https://www.medrxiv.org/content/10.1101/2020.07.15.20154609v1. doi: https://doi.org/10.1101/2020.07.15.20154609
- 46. Ristovic V, de Roock S, Mesana TG, van Diepen S, **Sun LY.** (2020). The Impact of Preoperative Risk on the Association Between Hypotension and Mortality After Cardiac Surgery. *Journal of Clinical Medicine*. 30;9(7):E2057
- 47. **Sun LY**, Gaudino M, Chen RJ, Bader Eddeen A, Ruel M. (2020). Long-Term Outcomes of Patients with Severely Reduced Left Ventricular Ejection Fraction Undergoing Percutaneous Coronary Intervention versus Coronary Artery Bypass Grafting. *JAMA Cardiology*. 5(6):631-641.
- 48. Ngu J, Jabagi H, Chung A, Boodhwani M, Ruel M, Bourke M, **Sun LY**. (2020). Defining an intraoperative hypotension threshold in association with de novo renal replacement therapy after cardiac surgery. *Anesthesiology*. *132*(6):1447-1457.
- 49. **Sun LY,** Spence S, Benton S, Beanlands R, Bader Eddeen A, Lee DS. (2020). Age, Not Sex, Modifies the Effect of Frailty on Long-term Outcomes after Cardiac Surgery. *Annals of Surgery. Online first June 24*.
- 50. Hayatsu Y, Ruel M, Bader Eddeen A, **Sun LY.** (2020). Single versus Multiple Arterial Revascularization in Patients with Reduced Renal Function: Long-Term Outcome Comparisons in 23,406 CABG Patients from Ontario, Canada. *Annals of Surgery. Online first June 11*.
- 51. Rubens FD, Coutinho T, Bader Eddeen A, **Sun LY**. (2020) The impact of a second arterial conduit on longterm post-discharge outcomes in women and men after coronary artery bypass grafting. *Journal of Thoracic and Cardiovascular Surgery*. S0022-5223(20)31007-2.
- 52. Zelt JGE, Hossain A, **Sun LY**, Mehta S, Chandy G, Davies RA, Contreras-Dominguez V, Dunneb R, Doyle-Cox C, Wells G, Stewart DJ, Mielniczuk LM. (2020). Incorporation of Renal Function in Mortality Risk Assessment for Pulmonary Arterial Hypertension. *Journal of Heart and Lung Transplantation*. \$1053-2498(20):31487.
- 53. Hoang-Kim A, Parpia C, Freitas C, Austin PC, Ross HJ, Wijeysundera H, Tu K, Mak S, Farkouh ME, **Sun LY**, Schull MJ, Mason R, Lee DS, Rochon PA. (2020). Readmission Rates Following Heart Failure: A Scoping Review of Sex and Gender Based Considerations. *BMC Cardiovascular Disorders*. 20(1):223.
- 54. Monaco F, Di Prima AL, Kim JH, Plamondon MJ, Yavorovskiy A, Likhvantsex V, Lomivorotov V, Hajjar LA, Landoni G, Riha H, Farag AMGA, Gazivoda G, Lei C, Bradic N, El-Tahan MR, Bukamal NAR, **Sun LY**, Wang CY. (2020). Management of Challenging Cardiopulmonary Bypass Separation. *J Cardiothorac Vasc Anesth*.
- 55. Johnston A, Mesana TG, Lee DS, Bader Eddeen A, **Sun LY**. (2019) Sex Differences in Long-Term Survival After Major Cardiac Surgery: A Population-Based Cohort Study. *JAHA*, 8(17):e013260.
- 56. **Sun LY**, Kimmoun A, Takagi K, Liu PP, Bader Eddeen A, Mebazaa A. (2019). Ethnic Differences in Acute Heart Failure Outcomes in Ontario. *International Journal of Cardiology*, 291:177-182.25.
- 57. Jabagi H, Boodhwani M, Tran DT, **Sun LY**, Wells G, Rubens FD. The Effect of Preoperative Anemia on Patients Undergoing Cardiac Surgery: A Propensity-Matched Analysis. *Semin Thorac Cardiovasc Surg.* 2019;31(2):157-163.
- 58. Verma S, Southern DA, Raslan I, Norris CM, Graham MM, Bagshaw SM, Nagendran J, MacClure T, **Sun LY**, Chin WD, van Diepen S. (2019). Prospective validation and refinement of the APPROACH cardiovascular surgical intensive care unit readmission score. *Journal of Critical Care*. 54:117-121.
- 59. Zelt JGE, Mielniczuk LM, Liu PP, Dupuis JY, Chih S, Akbari A, **Sun LY**. (2018). Utility of Novel Cardiorenal Biomarkers in the Prediction and Early Detection of Congestive Kidney Injury Following Cardiac Surgery. *J. Clin.* Med, *7*(12), 540.

- 60. **Sun LY**, Tu JV, Bader Eddeen A, Liu PP. (2018). Long-Term Survival After Coronary Artery Bypass Grafting in Men and Women with Heart Failure and Preserved vs Reduced Ejection Fraction. *Journal of the American Heart Association*, 7(12), pii: e008902.
- 61. Tran DTT, Tu JV, Dupuis JY, Bader Eddeen A, **Sun LY**. (2018). Association of Frailty and Long-Term Survival in Patients Undergoing Coronary Artery Bypass Grafting. *JAHA*, 7(15), pii: e009882.
- 62. **Sun LY**, Tu JV, Coutinho T, Turek M, Rubens F, McDonnell L, Tulloch H, Mielniczuk LM. (2018). Sex Differences in Heart Failure Outcomes in an Ambulatory, Population-Based Cohort. *CMAJ*, 190(28), E848-E854.
- 63. **Sun LY**, Tu JV, Sherrard H, Coutinho T, Turek M, Rodger N, McDonnell L, Tulloch H, Mielniczuk LM. (2018). Sex-Specific Temporal Trends in Incidence and Mortality for Urban and Rural Ambulatory Heart Failure Patients in Eastern Ontario. *Journal of Cardiac Failure*, pii: S1071-9164(18), 30870-4.
- 64. **Sun LY**, Chung AM, Farkouh M, Van Diepen S, Weinberger J, Bourke M, Ruel M. (2018). Defining a Perioperative Hypotension Threshold in Association with Stroke in Cardiac Surgery. *Anesthesiology*, 129(3), 440-447.
- 65. Jagabi H, Boodhwani M, Tran DT, **Sun LY**, Well G, Rubens FD. (2018). The effect of preoperative anemia on patients undergoing cardiac surgery: a propensity-matched analysis. *Seminars in Thoracic and Cardiovascular Surgery*, \$1043-0679(18), 30215-6.
- 66. **Sun LY**, Tu JV, Lee DS, Beanlands RS, Ruel M, Austin PC, Bader Eddeen A, Liu PP. (2018). Disability-Free Survival After Coronary Artery Bypass Grafting in Women and Men with Heart Failure and Preserved versus Reduced Ejection Fraction. *Open Heart*, 5, e000911.
- 67. Prince SA, McDonnell LM, Turek M, Visintini S, Nahwegahbow AJ, Kandasamy S, **Sun LY**, Coutinho T. (2017). The State of Affairs of Cardiovascular Health Research in Indigenous Women in Canada: a Scoping Review. *Canadian Journal of Cardiology*, 34(4), 437-449.
- 68. **Sun LY**, Wijeysundera DN, Tait G, Beattie WS. (2015). Association of Intraoperative Hypotension with Acute Kidney Injury after Elective Noncardiac Surgery. *Anesthesiology*, 123(3), 515-23.
- 69. **Sun LY**, Gershon AS, Ko DT, Thilen SR, Yun L, Beattie WS, Wijeysundera DN. (2015). Trends of Pulmonary Function Testing before Non-Cardiothoracic Surgery in a Population-Based Cohort. *JAMA Internal Medicine*, 175(8), 1410-2.
- 70. Barra L, Ha A, **Sun LY**, Fonseca C, Pope J. (2014). Efficacy of biologic agents in improving the Health Assessment Questionnaire (HAQ) score in established and early rheumatoid arthritis: a meta-analysis with indirect comparisons. *Clin Exp Rheumatol*, 32(3), 333-341.
- 71. **Sun LY**, Boodhwani M, Baer H, McDonald B. (2013). The association between tracheostomy and sternal wound infection in postoperative cardiac surgery patients. *Canadian Journal of Anesthesia*, 60(7), 684-691.
- 72. Murphy MJ, Tichauer KM, Sun LY, Chen X, Lee TY. (2011). Mean transit time as an index of cerebral perfusion pressure in experimental systemic hypotension. *Physiological Measurement*, 32(4), 395-405.

Peer-Reviewed Publications: Other

- 1. **Sun LY**, Echefu G, Doshi K, Roberts ML, Hamid A, Cheng RK, Olson J and Brown SA. (2023) Commentary: "Multimodality advanced cardiovascular and molecular imaging for early detection and monitoring of cancer therapy-associated cardiotoxicity and the role of artificial intelligence and big data". *Front. Cardiovasc. Med.* 10:982028.
- 2. Jones P, **Sun LY**, Brenner M. (2022). Outcomes from Intraoperative Handovers of Anesthesia Care. *JAMA*. *328*(*18*):*1869*.
- 3. Ruel M, Williams A, Ouzounian M, **Sun LY**, Legare JF, Poirier P, Malas T, Farkouh ME, Chedrawy E, Hassan A, Higgins J, Connelly K, McClure RS, Bewick D, Whitlock R, Graham M, Arora R. (2022). Missing the Goal with the 2021 ACC/AHA/SCAI Guidelines for Coronary Artery Revascularization. *Can J Cardiol. S0828-282X(22)00202-1*.

- 4. Jabagi H, Nantsios A, Ruel M, Mielniczuk LM, Denault AY, **Sun LY.** (2022). A Standardized Definition for Right Ventricular Failure in Cardiac Surgery Patients. *ESC Heart Failure*. *9*(3):1542-1552.
- 5. **Sun LY.** (2021). Personalizing the Management of Cardiac Surgery Patients through Right Heart Biomarkers. *Asian Hospital and Healthcare Management*. 52:27-28.
- 6. Hayatsu Y, Ruel M, **Sun LY**. (2020). Response to Comment on "Single Versus Multiple Arterial Revascularization in Patients with Reduced Renal Function Long-term Outcome Comparisons in 23,406 CABG Patients from Ontario, Canada". *Annals of Surgery. Online ahead of print*.
- 7. **Sun LY**, Gaudino M, Ruel M. (2020). Reply to "Patients with severely reduced ejection fraction undergoing revascularization is something missing?" *JAMA Cardiology*. 4(2):242.
- 8. Ruel M, **Sun LY**, Farkouh M, Gaudino M. (2020). Implications of the ISCHEMIA Trial on the Practice of Surgical Myocardial Revascularization. *Journal of Thoracic and Cardiovascular Surgery*. S0022-5223(20)32576-9.
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VI. GRANTS

Current External Funding:

Date(s)	Source	Type	Investigator	Amount
2023/7 -	American Heart Association Career	Type:	My Role:	Funding Total:
2026/6	Development	Grant	Mentor	\$231,000
	Perioperative Cardiovascular Complications of Patients with End- stage Kidney Disease.	Purpose: Operating	PI: Vikram Fielding-Singh Mentors:	
			Glenn Chertow, Louise Sun,	
			Arden Morris, Wolfgang	
			Winkelmayer	
2023/4 -	Stanford Cardiovascular Health	Type:	My Role:	Funding Total:
2024/3	Innovations	Grant	Co-PI	\$28,000
	Impact of chronic opioid exposure on vasopressor response in patients undergoing cardiovascular surgery	Purpose: Operating	Co-PI: Detlef Obal	
			<u>Co-investigator</u> : Amelia Claire Watkins	
2023/4 -	Stanford Cardiovascular Health	<u>Type:</u>	My Role:	Funding Total:
2024/3	Innovations	Grant	Co-PI	\$50,000
	Obituaries as a Potential Strategy to Obtain Death Data	Purpose: Operating	<u>Co-PI:</u> Isabella Chu	
			Co-investigator:	
			Michael Fischbein	
2022/9 – 2026/8	Canadian Institutes of Health Research (CIHR)	Type: Grant	My Role: PI	Funding Total: \$487,304
	Sex, gender and intersecting social factors within interprofessional cardiac operating room teams: A new, multimethods approach to optimizing	Purpose: Operating	Co-PI: Cole Etherington Co-investigators:	

	practice, provider well-being, and patient outcomes		Peter Austin, Sylvain Boet, Ian Graham, Douglas Lee, Paula Rochon, Marc Ruel Collaborators: Rakesh Arora, Maggie Mills, Melissa Goulet, Jean Bilodeau, Bernard Jasmin, Erika MacPhee, Virginia Roth	
2022/8 – 2025/7	Heart and Stroke Foundation of Canada (HSFC) Psychological Profile and Intervention	Type: Grant Purpose:	My Role: Co-investigator Principal Investigator:	Funding Total: \$288,033
	Needs of Patients with Spontaneous Coronary Artery Dissection: Phase 1b of Intervention Development	Operating	H. Tulloch Co-investigators: K Bouchard, T. Coutinho, S. Liu, S. Mulvagh, J. Reed, J. Saw, D. So, L. Sun, G. Wells	
2022/3 – 2024/2	Canadian Institutes of Health Research (CIHR)	Type: Grant	My Role: PI	Funding Total: \$500,000
	Systematic implementation and impact evaluation of data-driven cardiac surgery triaging tools to optimize operational efficiency and enhance patient outcomes during the COVID-19 pandemic and beyond	Purpose: Operating	Co-investigators: Ian Graham, Michelle Graham, Marc Ruel, Sean van Diepen Knowledge Users: Roni Atoui, Stephen Fremes, Paul Fedak, Andre Lamy, Jayan Nagendran, Dave Nagpal, Colleen Norris, Maral Ouzounian, Subodh Verma	
			Collaborators: Cathy Cattarazza, Charles Cutrara, Stacy O'Blenes, Igo Ribeiro, Shelly Vallaire	
2022/3 – 2024/2	Canadian Institutes of Health Research (CIHR)	Type: Grant	My Role: Co-PI	Funding Total: \$411,126
	The indirect impact of COVID-19 on cardiac function and associated outcomes in patients awaiting cardiac surgery: An opportunity to inform data-driven surgical wait list management	Purpose: Operating	Co-Principal Investigators: Wilton van Klei, Louise Sun, Justyna Bartoszko Co-investigators: Azad Mashari, Sarah Miles, Jacobo Moreno, Maral Ouzounian, Miki Peer, Fayez	

			Quereshy, Vivek Rao, Wendy Tsang	
2022/4 – 2029/3	Canadian Institutes of Health Research (CIHR)	Type: Grant	My Role: Co-investigator	Funding Total: \$2,786,128
	The Canadian CABG or PCI in Patients with Ischemic Cardiomyopathy (STICH 3.0) Trial	Purpose: Operating	Co-Principal Investigators: S. Fremes, M. Gaudino, M. Jolicoeur, J.L. Rouleau	
			Co-investigators: R. Arora, S. Bedard, M. Farkouh, M. Graham, J. Healey, J. Howlett, A. Kiss, D. Ko, D. Lee, G. Marquis-Gravel, R. Masterson Creber, M. McGillon, M. Ruel, L. Sun, R. Swartz, P. Voisine	
2022/4 – 2025/3	Canadian Institutes of Health Research (CIHR)	<u>Type:</u> Grant	My Role: Co-investigator	Funding Total: \$577,574
2022/4 —	Psychological Profile and Intervention Needs of Patients with Spontaneous Coronary Artery Dissection: Phase 1b of Intervention Development Ontario Ministry of Health	Purpose: Operating Type:	Principal Investigator: H. Tulloch Co-investigators: K Bouchard, T. Coutinho, S. Liu, S. Mulvagh, J. Reed, J. Saw, D. So, L. Sun, G. Wells My Role:	Funding Total:
2024/3	Sex, gender and intersecting social factors within interprofessional cardiac operating room teams: A new, mixed-methods approach to optimizing practice, provider well-being, and patient outcomes	Grant Purpose: Operating	PI Co-investigators: Cole Etherington, Sylvain Boet, Ian Graham Collaborators: Marc Ruel, Jean Bilodeau, Ed Jordison, Melissa Goulet, Erika MacPhee	\$72,000
2020/9 – 2024/8	Heart and Stroke Foundation of Canada (HSFC) National New Investigator Award	Type: Salary award	Principal Investigator: Louise Sun	Funding Total: \$260,000 (declined due to COVID-19)
2019/4 - 2023/3	Canadian Institutes of Health Research (CIHR)	Type: Grant	My Role: PI	Funding Total: \$260,101
	<u>Title:</u>	Purpose: Operating	Co-investigators: Douglas Lee, George Wells, Heather Tulloch, Lisa Duffett,	

Development and Application of a	Marc Ruel, Peter Austin, Rob
Patient-Defined Outcome in Patients	Beanlands
with Ischemic Cardiomyopathy	
	Collaborator:
	Graham Woodward, Jean
	Bilodeau

Current Internal Funding:

Date(s)	Source	Type	Investigator	Amount
2022/4 -	Faculty of Medicine Path to Patenting and	Type:	My Role:	\$60,000
2024/3	Pre-Commercialization Grant	Operating	PI	
	Title:		Collaborators:	
	Data-driven cardiac surgery triaging		Marc Ruel, Carmel Coleman,	
	tools to optimize operational efficiency		Cathy Cattarazza, Shelley	
	and enhance patient outcomes		Vallaire, Colleen Norris	
2021/9 –	University of Ottawa Heart Institute	Type:	My Role:	\$50,000
2022/8	ORACLE Innovations Fund	Operating	PI	
	Title:			
	Prototype refinement and prospective		Co-investigator:	
	testing of an artificial intelligence		Robert Chen	
	algorithm for real-time prediction of			
	critical hypotensive events in the		Collaborators:	
	operating room and intensive care unit		Eric Zhang, Anne Guertin- Lester, Stephanie Liddle	
2021/9 –	University of Ottawa Heart Institute	Type:	My Role:	\$50,000
2022/8	ORACLE Innovations Fund	Operating	Co-Investigator	450,000
		1 0		
	<u>Title:</u>		<u>PI:</u>	
	Atrial Fibrillation in Nunavut: Incidence and Risk Factors		David Birnie	
			Co-investigators:	
			Louise Sun, George Wells, Jodi	
			Edwards	
2021/9 –	University of Ottawa Faculty of Medicine Translational Research Grant	Type:	My Role:	\$50,000
2022/8	Transfational Research Grant	Operating	PI	
	<u>Title:</u>		Ca Nia	
	Predicting right heart failure after cardiac surgery using proteomics and machine		Co-PIs: Louise Sun, Mathieu Lavallee-	
	learning		Adam	
2021/7 –	uOttawa Department of Anesthesia and	Type:	My Role:	\$25,390
2022/6	Pain Medicine Operating Grant	Operating	PI	

<u>Title:</u>	Collaborators:
Prototype refinement and prospective	Robert Chen, Eric Zhang, Anne
testing of an artificial intelligence	Guertin-Lester, Stephanie
algorithm for real-time prediction of	Liddle
critical hypotensive events in the	
operating room and intensive care unit	

Past External Funding:

Date(s)	Source	Type	Investigator	Amount
2021/3 -	Canadian Institutes of Health Research	Type:	My Role:	Funding Total:
2022/2	(CIHR)	Grant	Co-investigator	\$50,000
	COVID-19 Variant Supplement -			
	Improving Outcomes in Individuals with	<u>Purpose</u> :	Principal Investigators:	
	COVID-19 with Renin-Angiotensin System	Operating	Peter Liu, David Birnie, Shaun	
	Inhibition: The COVID-RASi Trial		Goodman	
			Co-investigators:	
			C. Chow, J. Ezekowitz, M.	
			Farkouh, A. Forster, J. Healey,	
			P. Lawler, D. Lee, E.	
			McDonald, F. McAlister, G.	
			Oudit, R. Patel, A. Sharma, D.	
			So, L. Sun , K. Tu, G. Wells	
2020/8 -	Heart and Stroke Foundation of Canada	Type:	My Role:	Funding Total:
2021/7	(HSFC)	Grant	Co-investigator	\$50,000
	Title:	Purpose:	Principal Investigator:	
	Psychological Profile and Needs of	Operating	Heather Tulloch	
	Patients with Spontaneous Coronary	Operating	Heather Tulloch	
	Artery Dissection (SCAD)		Co-investigators:	
	, , ,		Derek So, Jacqueline Saw,	
			Jennifer Reed, Karen Bouchard,	
			Sharon Mulvagh, Thais Coutinho	
2020/7 –	Canadian Frailty Network	Type:	My Role:	Funding Total:
2022/3		Grant	Co-investigator	\$185,459
	<u>Title:</u>			
	Population-estimable frailty using "big	<u>Purpose</u> :	Principal Investigators:	
	data" to predict Covid-19 infection and	Operating	Douglas Lee, Harindra	
	illness severity		Wijeysundera	
			Co-investigators:	
			Jacob Udell, Louise Sun , Jeff	
			Kwong, Heather Ross, Moira	
			Kapral, Paula Rochon, Peter	

			Austin, Bo Wang, Husam	
			Abdel-Qadir, Peter Liu	
020/7 -	Canadian Institutes of Health Research	Type:	My Role:	Funding Total:
2021/6	(CIHR)	Grant	Co-investigator	\$1,176,019
	<u>Title:</u>	<u>Purpose</u> :	Principal Investigators:	
	Improving Outcomes in Individuals with	Operating	Peter Liu, David Birnie, Shaun	
	COVID-19 with Renin-Angiotensin System Inhibition: The COVID-RASi		Goodman	
	Trial		Co-investigators:	
			C. Chow, J. Ezekowitz, M.	
			Farkouh, A. Forster, J. Healey,	
			P. Lawler, D. Lee, E.	
			McDonald, F. McAlister, G.	
			Oudit, R. Patel, A. Sharma, D.	
			So, L. Sun, K. Tu, G. Wells	
2020/7 -	Canadian Institutes of Health Research	Type:	My Role:	Funding Total:
2021/6	(CIHR)	Grant	Co-investigator	\$409,179
	<u>Title:</u>	Purpose:	Principal Investigators:	
	Improving Canadian Outcomes Research	Operating	Douglas Lee, Finlay McAlister	
	On the Novel SARS-CoV-2 using			
	Analytics: the CORONA Consortium		Co-investigators:	
			H. Abdel-Qadir, P. Austin, K.	
			Bainey, J. Bakai, J. Ezekowitz,	
			S. Goodman, R. Greiner, A. Ha,	
			C. Jackevicius, M. Kapral, P.	
			Kaul, N. Khan, D. Ko, A.	
			Krahn, J. Kwong, M. Lindsay,	
			P. Liu, S. Nagpal, P. Rochon, I.	
			Roifman, H. Ross, R. Sandu, M.	
			Schull, L. Sun, J. Udell, B.	
			Wang, R. Welsh, H.	
			Wijeysundera, A. Yu, S.	
			Zieroth, C. de Mestral, S. van	
			Diepen	
2020/7 –	Ontario Ministry of Health and Long-	Type:	My Role:	Funding Total:
2021/6	Term Care	Grant	Co-investigator	\$100,000
	Title:	<u>Purpose:</u>	PI: Sylvain Boet	
	Protecting healthcare workers during the	Operating		
	COVID-19 pandemic: Improving safe		Co-investigators:	
	usage of Personal Protective Equipment		Audette A, Brehaut JC, Burns	
	by video feedback.		JK, Cheung W, Etherington N,	
			Grimshaw J, Hamilton S,	
	Program:		McCartney C, Posner G, Roth	
	Innovations Competition		V, Sun L, Taljaard M	
2020/6 –	Ontario Ministry of Health and Long-	Type:	My Role:	Funding Total:
2021/5	Term Care	Grant		\$25,000

			PI	
	Title:	Purpose:	11	
	Cardiac surgery triaging tools to reduce	Operating	Co-investigators:	
	mortality while maximizing intensive	SF8	Harindra Wijeysundera,	
	care resources during the COVID-19		5 5	
	crisis		Douglas Lee, Marc Ruel, Sean	
			van Diepen	
	Program:		Collaborators:	
	Innovations Competition		Graham Woodward, Thierry	
			Mesana	
2020/5 -	Canadian Cardiovascular Society C3I	Type:	My Role:	Funding Total:
2021/4		Grant	Co-investigator Co-investigator	\$1,5000
	Title:			. ,
	Consequences of delays in cardiac	Purpose:	Principal Investigator:	
	procedures and surgeries due to the	Operating	Derrick Tam, Harindra	
	COVID-19 pandemic	978	Wijeysundera	
	COVID 19 pandenne		Wijeysundera	
			Co-investigators:	
			Stephen Fremes, Maral	
			Ouzounian, Sandra Lauck,	
			Ansar Hassan, Beate Sanders,	
			David Naimark, Louise Sun	
2020/4 -	Canadian Institutes of Health Research	Trimor		Funding Totals
2020/4 – 2021/3	(CIHR)	Type:	My Role:	Funding Total:
2021/3	(CIHK)	Grant	Co-investigator	\$100,000
	Title:	Purpose:	Principal Investigator:	
	Psychological Profile and Needs of	Operating	Heather Tulloch	
	Patients with Spontaneous Coronary	Operating	Heather Tunoch	
	Artery Dissection (SCAD)			
	Artery Dissection (SCAD)		Co-investigators:	
			Derek So, Jacqueline Saw,	
			Jennifer Reed, Karen Bouchard, Sharon Mulvagh, Thais Coutinho	
2019/4 -	Canadian Institutes of Health Research	Type:	My Role:	Funding Total:
2023/3	(CIHR)	Grant	PI	\$260,101
2020/0	(CIIII)	Grant		\$200,101
	Title:	Purpose:	<u>Co-investigators:</u>	
	Development and Application of a	Operating	Douglas Lee, George Wells,	
	Patient-Defined Outcome in Patients	Operating	Heather Tulloch, Lisa Duffett,	
	with Ischemic Cardiomyopathy		Marc Ruel, Peter Austin, Rob	
	Isonomic Cardiomyopamy		Beanlands	
			Deamands	
			Collaborator:	
			Graham Woodward, Jean	
			Bilodeau	
2019/4 -	Ontario Ministry of Health and Long-	Type:	My Role:	Funding Total:
2021/3	Term Care	Grant	PI	\$50,000
2021/3		Stant		+20,000
	Title:	Purpose:	Co-investigators:	
		Operating	George Wells, Thais Coutinho	
		Operating	George Wells, Thais Coutlinto	

2018/9 - 2022/8	Sex Differences in Outcomes After Multiple Arterial Coronary Revascularization Program: Innovations Competition Canadian Institutes of Health Research (CIHR) Title: Healing Hearts Together	Type: Grant Purpose: Operating	Principal Investigators Fraser Rubens, Louise Sun My Role: Co-investigator Co-investigators: Andrew Pipe, Giorgio Tasca, Jennifer Reed, Lisa Mielniczuk, Louise Sun, Sue Johnson	Funding Total: \$684,675
2018/4 - 2021/3	Ted Rogers Centre for Heart Research	Type: Grant	Principal Investigator: Heather Tulloch, Paul Greenman My Role: Co-investigator	Funding Total: \$1,000,000
	Title: Novel clinical, molecular, and –omics approaches to prediction, stratification and insights on disease mechanism in heart failure Program: Ted Rogers Innovation Strategic Grant	Purpose: Operating	Co-investigators: Anna Goldenberg, Anna Woo, Anthony Gramolini, Catherine Kreatsoulas, Cedric Manlhiot, Daniel Levy, Dinesh Thavendiranathan, Faiez Zannad, Filio Billia, Geoff Anderson, Jennifer E. Ho,, Louise Sun, Patrick Lawler, Paul Angaran, Peter Austin, Peter Liu, Slava Epelman, Wendy Tsang Collaborator: Hassan Jaferi Principal Investigator:	
2018/4 - 2020/3	Ontario Ministry of Health and Long- Term Care	Type: Grant	Douglas Lee, Heather Ross My Role: PI	Funding Total: \$50,000
	Title: The Impact of Revascularization Options on Disability-Free Survival in Patients with Ischemic Cardiomyopathy	Purpose: Operating	Co-investigators: Douglas Lee, Jack Tu, Marc Ruel, Peter Austin, Rob Beanlands	
	Program: Innovations Competition		Collaborator: Heather Sherrard, Jean Bilodeau	

2018/4 -	Canadian Institutes of Health Research	Type:	My Role:	Funding Total:
2019/3	(CIHR)	Grant	Co-investigator	\$40,000
2017/3	Title: Bringing the patient voice into the operating room: engaging patients in surgical safety Program: SPOR Patient-Oriented Research Collaboration Grant	Purpose: Operating	Co-investigators: Antoine Przbylak-Brouillard, Julie Kenna, Justin Presseau, Laurie Proulx, Louise Sun, Mark Walker, Sandy Lam, Sukhbir Singh, Teodor Grantcharov Principal Investigator:	940,000
			Nichole Etherington, Sylvain	
			Boet	
2017/7 - 2020/6	Canadian Institutes of Health Research (CIHR)	Type: Grant	My Role: Co-investigator	Funding Total: \$448,848
	Title: Does One Size Fit All? The Implications of Gender for OR Team Performance, Teamwork Interventions, and Equitable Patient Outcomes Program: Impact of Gender on Knowledge Translation Team Grant	Purpose: Operating	Co-investigators: Arija Birze, Isabelle Raiche, Jack Tu, Jamie Brehaut, Jeremy Grimshaw, Justine Baron, Karine Lortie, Louise Sun , Melissa Duffy, Monica Taljaard, Nicole Etherington, Simon Kitto, Sukhbir Singh, Teodor Grantcharov, Tracey Adams Co-knowledge User:	
			Paula Doering Principal Investigator: Sylvain Boet	
2015/6 -	Heart and Stroke Foundation of Canada	Type:	My Role:	Funding Total:
2015/8	(HSFC) Summer Student Award Title: Association of Intraoperative Hypotension and Cerebrovascular Accidents after Major Cardiac Surgery	Scholarship	Principal Supervisor Mentee: Amy Chung	\$5,000

Past Internal Funding:

Date(s)	Source	Type	Investigator	Amount
2020/12	The Ottawa Hospital Academic Medical	Type:	My Role:	\$100,000
_	Organization Innovations Grant	Operating	Co-Investigator	
2021/11			G. Di	
			<u>Co-PIs:</u>	

2020/11 - 2022/10	Faculty of Medicine COVID-19 Response Grant Title: Cardiac surgery triaging tools to reduce mortality while maximizing intensive care resources during the COVID-19 crisis	Type: Operating	Boet S, Castelluci L, Fergusson D, Katznelson R, MacDonald J, Taljaard M My Role: PI Co-investigators: Sean van Diepen, Marc Ruel Collaborators: Graham Woodward, Thierry	\$50,000
2020/11 - 2022/10	University of Ottawa Faculty of Medicine Translational Research Grant Title: Chasing heart failure patients susceptible to a wasting syndrome, cardiac cachexia	Type: Operating	Mesana My Role: PI Co-PIs: Kyoung-Han Kim, Erin Mulvihill	\$50,000
2020/9 — 2025/8	University of Ottawa Tier 2 Clinical Research Chair in Big Data and Cardiovascular Outcomes	Type: Salary award	My Role: PI	\$500,000
2020/7 – 2021/6	University of Ottawa Department of Anesthesia and Pain Medicine Operating Grant Title: A novel machine learning approach to predicting right ventricular failure after cardiac surgery using clinical and proteomics data	Type: Operating	My Role: PI Co-investigators: Mathieu Lavallée-Adam, Peter Liu, Liyong Zhang	Funding Total: \$28,383
2020/5 – 2021/4	The Ottawa Hospital Foundation COVID-19 Emergency Response Fund Title: Resource Allocation Model to Balance the Hospital Capacity Needs during the COVID-19 Pandemic	Type: Grant Purpose: Operating	My Role: Co-investigator Principal Investigator: Kednapa Thavorn, Peter Liu, Alan Forster Co-investigators: Rob Beanlands, Douglas Lee, Louise Sun, Jamie Brehaut, Sasha van Katwyk	Funding Total: \$2,5000

2019/10 - 2021/9	University of Ottawa Heart Institute (Ottawa, ON) Ernest and Margaret Ford Research Fellowship	Type: Fellowship	My Role: Co-investigator	Funding Total: \$100,000
	Title: Transatlantic Biomarker and Big Data Research Collaborative		Principal Investigator: Alice Blet	
2019/6 – 2020/5	University of Ottawa Department of Anesthesia and Pain Medicine Operating Grant	Type: Grant	My Role: PI	Funding Total: \$ 30,000
	Title: IMpact of Physician sEx anD sociodemogrAphics oN Cardiac surgery outcomEs – the IMPEDANCE study	Purpose: Operating	Co-investigators: Nicole Etherington; Sylvain Boet; Vincent Chan Collaborator: Jean Bilodeau; Thierry Mesana	
2019/6 – 2020/5	University of Ottawa Heart Institute (Ottawa, ON) ORACLE Innovations Fund	Type: Grant	My Role: PI	Funding Total: \$ 50,000
	Title: IMpact of Physician sEx anD sociodemogrAphics oN Cardiac outcomEs – the IMPEDANCE study	Purpose: Operating		
2019/6 – 2020/5	University of Ottawa Heart Institute (Ottawa, ON) ORACLE Innovations Grant	Type: Grant	My Role: PI	Funding Total: \$50,000
	Title: Sex Considerations in Long-Term Outcomes after Surgical Aortic Valve Replacement	Purpose: Operating	Co-investigators: George Wells Principal Investigator:	
			Fraser Rubens, Louise Sun	
2018/6 - 2019/5	University of Ottawa Title:	Type: Grant	My Role: PI	Funding Total: \$30,000
	Impact of Revascularization on Disability-Free Survival	<u>Purpose:</u> Operating	Co-investigators: Douglas Lee, Jack Tu, Marc Ruel, Peter Austin, Rob	
	Program: Faculty Innovation Competition		Beanlands	
2018/6 - 2018/8	University of Ottawa Summer Student Scholarship	Type: Scholarship	My Role: Principal Supervisor	Funding Total: \$5,000
	Title: Determinants of Left Ventricular Function Recovery After Revascularization: a Retrospective Cohort Study		Mentee: Dylan DeMarco	
2017/7 - 2019/6	University of Ottawa Heart Institute (Ottawa, ON) ORACLE Team Grant	Type: Grant	My Role: PI	Funding Total: \$100,000

	Title: PRehabilitiation in Elective Frail and	Purpose: Operating	Co-investigators: Andrew Pipe, Giovanni Ferrari,	
	Elderly Cardiac Surgery PaTients (PREFECT): Assessing the Impact of a Personalized Prehabilitation Program Before Cardiac Surgery on Frailty and Clinical Outcomes		Jacqueline Fortier <u>Co-knowledge User:</u> Kathryn Caldwell, Regan Kiefer	
			Principal Investigator: Jennifer Reed, Juan Grau, Louise Sun	
2016/7 - 2017/6	University of Ottawa Department of Anesthesiology Operating Grant	Type: Grant	My Role: PI	Funding Total: \$49,837
	Title: A Personalized Approach to the Epidemiology of Heart Failure in Diabetic Patients Undergoing Cardiac Procedures	Purpose: Operating	Co-investigators: George Wells, Jack Tu, Peter Liu	
2016/1 - 2017/12	University of Ottawa Heart Institute (Ottawa, ON) Heart Teams Research Competition	Type: Grant	My Role: Co-investigator	Funding Total: \$131,360
	Title: Early Vascular Aging in Women at Risk for Cardiovascular Disease: The EVA Study	Purpose: Operating	Co-investigators: Heather Sherrard, Heather Tulloch, Jane Brownrigg, Lisa McDonnell, Lisa Mielniczuk, Michelle Turek, Peter Liu	
			Principal Investigator: Thais Coutinho	
2016/1 - 2017/12	University of Ottawa Heart Institute (Ottawa, ON) Heart Teams Research Competition	Type: Grant	My Role: PI	Funding Total: \$132,464
	Title: Influence of Gender on Cardiac Referral, Quality Indicators and Outcomes in Heart Failure Care in Ontario	Purpose: Operating	Co-investigators: Heather Sherrard, Heather Tulloch, Jack Tu, Jane Brownrigg, Lisa McDonnell, Michelle Turek, Thais Coutinho	
			Principal Investigator: Lisa Mielniczuk, Louise Sun	
2015/8 - 2016/8	University of Ottawa Heart Institute (Ottawa, ON) Ottawa Region for Advanced Cardiovascular Research	Type: Grant	My Role: PI	Funding Total: \$49,555
	Excellence (ORACLE) Title: Utilization of Novel Biomarkers in Prediction of Right Ventricular Failure and Acute Kidney Injury in Patients	Purpose: Operating	Co-investigators: Ayub Akbari, Lisa Mielniczuk, Peter Liu, Sharon Chih	

Undergoing Major Cardiac Surgery - A		
Pilot Study		

VII. INTERNATIONAL COLLABORATION ACTIVITIES

2021 - 2022	Principal Investigator, Canada-UK Long-term heart failure risk prediction
2020 –	Co-investigator, North America AI collaborative on Cardio-Oncology and Informatics Research
2020	Co-investigator, Canada-UK Sex differences in outcomes after coronary revascularization
2019 - 2020	Co-PI, Transatlantic biomarker collaboratory for heart failure/shock prognosis and therapy
2018 - 2019	Co-PI, Canada-France Population-based research on the impact of ethnicity on heart failure outcomes

VIII. PATENTS

- 1. Inventor: Louise Sun. Systems, Methods and Apparatus for Predicting Hemodynamic Events. University of Ottawa Heart Institute. PCT international patent # PCT/CA2022/051085. File date: July 12, 2022.
- 2. Inventor: Louise Sun. Systems, Methods and Apparatus for Predicting Hemodynamic Events. University of Ottawa Heart Institute. US provisional patent # 63/232,337. File date: August 12, 2021.
- 3. Inventor: Louise Sun. Health Care Resources Management. University of Ottawa Heart Institute and Institute for Clinical Evaluative Sciences. PCT international patent # PCT/CA2021/051033. File date: July 23, 2021.
- 4. Inventor: Louise Sun. Health Care Resources Management. University of Ottawa Heart Institute. US provisional patent # 63/055,620. File date: July 23, 2020.

IX. EDITORIAL SERVICE

Editorial Positions

2022 -	Editorial Board Member, Canadian Journal of Anesthesia
2022 –	Guest Editor, Journal of Cardiovascular Development and Disease
2021 –	Cardiology Section Editor, Intelligence-Based Medicine (Journal)
2021 –	Guest Editor, Intelligence-Based Medicine, Cardiology themed issue (Journal)
2021	Associate Editor, Intelligence-Based Cardiology: Artificial Intelligence and Human Cognition in
	Cardiovascular Medicine and Cardiac Surgery (Book)

Ad Hoc Reviewer

2023 –	JACC: Advance
2023 –	JACC: Heart Failure
2021 -	Lancet Regional Health – Europe
2021 -	American Heart Journal
2021 -	British Journal of Anesthesia
2021 -	Canadian Journal of Cardiology Open
2020 -	JAMA Cardiology
2020 -	BMC Surgery
2020 -	Intelligence-Based Medicine
2019 –	Lancet

2019 –	Canadian Journal of Cardiology
2019 –	BMJ Open
2019 –	Anesthesiology
2018 –	JAMA
2018 –	JAMA Network Open
2018 –	International Journal of Cardiology
2018 -	CMAJ
2018 -	JAHA
2018 –	F1000 Research
2017 –	Current Medical Research and Opinion
2017 –	Canadian Journal of Anesthesia
2017 –	Journal of Cardiac Failure
2016 -	European Journal of Anesthesiology
2015 –	Annals of Internal Medicine
2015 –	Circulation

X. SERVICE AS GRANT REVIEWER

2022 –	Scientific Reviewer, Clinical Trials Training Platform, Canadian Institutes of Health Research (CIHR)
2022 –	Grant Budget Review Committee, Heart and Stroke Foundation of Canada
2021 - 2023	Scientific Reviewer, SCA Starter, Mid-Career and Diversity & Inclusion Grants, Society of
	Cardiovascular Anesthesiologists, USA
2021	Scientific Reviewer, College of Medicine Research Awards, University of Saskatchewan, Canada
2021	Reviewer, Non-clinical time allocation, Department of Anesthesiology and Pain Medicine, uOttawa
2020 - 2021	Academic Reviewer, Multi-Institutional Collaborative Clinical/Translational Research (MICoR)
	Grant, Society of Cardiovascular Anesthesiologists, USA
2020	External Reviewer, Physician Services Incorporated Grant Review Committee, Canada, Ontario
2018 - 2019	Scientific Reviewer, Heart and Stroke Foundation Scientific Grant Review Committee, Canada
2019	External Reviewer, Dutch Organization for Health Research and Development, The Netherlands
2017 - 2018	External Reviewer, Physician Services Incorporated Grant Review Committee, Canada, Ontario

XI. UNIVERSITY ADMINISTRATIVE SERVICE

Committee

2023 –	Member, Professoriate Rolling Search Committee, Department of Anesthesiology, Perioperative and
	Pain Medicine, Stanford University School of Medicine
2022 –	Member, Governance Committee, Department of Anesthesiology, Perioperative and Pain Medicine,
	Stanford University School of Medicine
2022 –	Member, Executive Committee, Cardiovascular Health Service Line, Stanford Healthcare
2021 –	Member, Data and Safety Monitoring Board, "RCT of cytisine compared to combination nicotine
	replacement therapy to reduce cigarette consumption in relapsed smokers". Canada, Ontario
2017 –	Committee Member, Anesthesia Research Committee, University of Ottawa, Canada, Ontario
2017 - 2022	Member of Organizing Committee, Gary Johnson Research Day, University of Ottawa
2015 –	Committee Member, Heart Failure Research Cluster, University of Ottawa Heart Institute
2016 - 2018	Committee Member, Research Ethics Board, The Ottawa Hospital, Canada, Ontario
2015 - 2018	Committee Member, Women's Heart Health Team, University of Ottawa Heart Institute

2015 - 2017	Committee Member, Transplant and Pumps Research Committee, University of Ottawa Heart Institute
2012 - 2013	Resident Member, Anesthesia Research Committee, University of Ottawa, Canada, Ontario

Leadership roles

2019 - 2020	Co-Chair, Data Governance Committee, University of Ottawa Heart Institute, Canada, Ontario
2015 - 2017	Co-Chair, Personalized INNovative perioperAtive Care and Long-Term outcomes rEsearch
	(PINNACLE) Research Cluster, University of Ottawa Heart Institute, Canada, Ontario

XII. SERVICE TO PROFESSIONAL ORGANIZATIONS

Membership

2020 –	Cardiology Oncology Informatics and Innovation Group
2016 –	American Heart Association
2016 –	Canadian Perioperative Anesthesia Clinical Trials Network
2016 –	Canadian Heart and Stroke Foundation's Women Heart and Brain Health Network
2015 –	Canadian Cardiovascular Society
2013 –	Society of Cardiovascular Anesthesiologists
2012 –	Canadian Anesthesiologist Society

Committee

2022	AHA Expert Consultant, for revisions to the U.S. Social Security Administration (SSA) on Medical
	Criteria to Identify Cardiovascular-Related Disabilities.
2022	Writing Group Member, AHA Scientific Statement on Myocardial Ischemia After Cardiac Surgery
2022 - 2023	Member of Planning Committee, Canadian Women's Heart Health Summit 2023
2021 –	Member of Advisory Board, American Board of Artificial Intelligence in Medicine (ABAIM)
2020 - 2021	Cardiology and Oncology Innovation Summit
2019 –	Committee Member, Research Committee, Society of Cardiovascular Anesthesiologists
2019 - 2020	Member of Research Subcommittee, Canadian Women's Heart Health Summit 2020
2018 –	Committee Member, Membership and Communications Committee, American Heart Association

Leadership roles

2023 –	Vice Chair, Research Committee, Society of Cardiovascular Anesthesiologists
2022 -	Cardiovascular Surgery and Anesthesia Council Leadership Committee, American Heart Association
2021 -	Regional Representative, Alliance of Centers of Artificial Intelligence in Medicine (ACAIM), international
2020 –	Scientific Officer, Canadian Cardiovascular Critical Care (CANCARE) Society
2019 - 2020	Consultant, CorHealth Ontario Cardiac Surgery Report Risk Adjustment Task Force
2019 –	Methodologist, Cerebral Protection Working Group, Society of Cardiovascular Anesthesiologists
2018	Advisor, Health Quality Ontario, Heart Failure Care in the Community Quality Standard Review
2018 - 2020	Executive Board Member, Canadian Cardiovascular Critical Care (CANCARE) Society
2016 - 2019	Co-Chair, Working Group on Sex-Based Disparities in Heart Failure, Champlain Local Health
	Integration Network (LHIN), Canada

XIII. PRESENTATIONS

Canadian Regional

1. Grand Rounds. (June 2022). "Blood pressure management in cardiac surgery". University of Ottawa Heart Institute, Ottawa, ON, Canada.

- 2. Grand Rounds. (May 2021). "Patient-defined outcomes in cardiovascular surgery". University of Ottawa Heart Institute, Ottawa, ON, Canada.
- 3. Lecture. (May 2021). "Precision Cardiovascular Medicine through Big Data, Informatics and Biotechnology". University of Ottawa Heart Institute Research Conference, Canada.
- 4. Lecture. (May 2021). "The association of patient sex with postoperative outcomes after inpatient general surgeries: a population-based cohort study." Institute for Clinical Evaluative Sciences Cardiovascular Research Rounds, Toronto, ON, Canada. Other presenters: Jones, P, Wijeysundera, D, Vogt, K.
- 5. Grand Rounds. (Oct 2020). "Data-driven tools to improve patient safety and system capacity during time of crisis". University of Ottawa Heart Institute, Ottawa, ON, Canada.
- 6. Lecture. (Sept 2020). "CardiOttawa: a simple decision aid to conserve critical care capacity during the COVID-19 crisis". CorHealth Ontario Stakeholder Forum, Ontario, Canada (virtual meeting).
- 7. Keynote. (Apr 2020). "Long-term outcomes in cardiovascular diseases and interventions: Sex matters." The Ottawa Hospital Cardiology Nurses Education Day, Ottawa, Canada (virtual meeting).
- 8. Lecture. (Sept 2019). "The importance of frailty in cardiac surgery risk adjustment". CorHealth Ontario Quality Working Group, Toronto, ON, Canada.
- 9. Workshops and/or Round Tables. (Aug 2019). "The Role of Big Data in Outcomes and Health Services Research". Ottawa, Cardiovascular Research Methods Centre Retreat, Montebello, QC, Canada.
- 10. Lecture. (May 2019). "Heart Failure: Sex Differences in Access and Outcomes". 5th Annual Regional Heart Symposium, Canada.
- 11. Lecture. (Mar 2019). "Health Care Disparities in Heart Failure Patients in the Community and After Cardiac Surgery". University of Ottawa Heart Institute Research Conference, Canada.
- 12. Lecture. (Oct 2018). "Evaluating the Hub & Spoke Model of Heart Failure Care in the Champlain Region". Champlain Local Health Integration Network, Ottawa, Canada.
- 13. Keynote. (Sept 2018). "The Life of a Clinician Scientist: What I Do and How I Got Here". Leacross Foundation Networking and Mentorship Forum, Ottawa, ON, Canada.
- 14. Lecture. (Sept 2018). "The Importance of Phenotype in the Perioperative Management of Patients with Heart Failure". Ontario Anesthesiologists Meeting, Toronto, Canada.
- 15. Keynote. (Aug 2018). "A Population and Precision-Based Research Program in Heart Failure and Perioperative Outcomes". Ottawa Heart Institute Research Corporation Board Education Session, Ottawa, Canada.
- 16. Lecture. (Aug 2018). "Sex Differences in heart failure outcomes in ambulatory and cardiac surgical patients in Ontario". School of Epidemiology and Public Health Seminar Series, Ottawa, Canada.
- 17. Lecture. (Oct 2017). "Sex Differences in Heart Failure Incidence and Outcomes in Ontario". Institute for Clinical Evaluative Sciences Cardiovascular Research-In-Progress Rounds, Toronto, Canada.
- 18. Lecture. (Sept 2017). "From Population to Precision: Innovations in Heart Failure Research". University of Ottawa Heart Institute Monday Research Conference, Canada.
- 19. Lecture. (Jun 2016). "Influence of Gender on Heart Failure Care in Ontario". Institute for Clinical Evaluative Sciences Cardiovascular Research Rounds, Toronto, Canada.
- Lecture. (May 2015). "Trends in Preoperative Pulmonary Function Testing Before Non-Cardiothoracic Surgery in a Population-Based Cohort". Institute for Clinical Evaluative Sciences Annual Research Forum, Toronto, Canada.

Canadian National

- 21. Lecture. (Oct 2022). "Health Services Research in Cardiovascular Medicine." Canadian Cardiovascular Congress. Ottawa, ON, Canada.
- 22. Lecture. (Oct 2022). "Top 4 Papers in Cardiovascular Critical Care." Canadian Cardiovascular Critical Care Symposium. Ottawa, ON, Canada.

- 23. Co-Chair. Symposium. (Oct 2022). "Sedating patients with cardiac disease: Tips and tricks for the general cardiologists from cardiac anesthesiologists and intensivists". Canadian Cardiovascular Congress, Ottawa, ON, Canada.
- 24. Lecture. (Oct 2022). "Conundrums in cardiogenic shock: point and counterpoint". Canadian Cardiovascular Congress, Ottawa, ON, Canada.
- 25. Panelist. (Oct 2022). "Atrial fibrillation and cardiac surgery: New investigators tackling an old problem". Canadian Cardiovascular Congress, Ottawa, ON, Canada.
- 26. Lecture. (Oct 2021). "Blood pressure management during cardiac surgery". Canadian Society of Clinical Perfusion Annual Meeting. (virtual meeting).
- 27. Workshops. (Oct 2020). "CANCARE Cup". Canadian Cardiovascular Congress, Edmonton, AB, Canada (virtual meeting).
- 28. Workshops and/or Round Tables. (Oct 2019). "Coronary Revascularization: Quality Indicators and Outcomes in Canada and Beyond". Canadian Cardiovascular Congress, Montreal, QC, Canada.
- 29. Workshops and/or Round Tables. (Oct 2019). "The Top 5 ICU Trials of 2019 for the Clinical Cardiologist". Canadian Cardiovascular Congress, Montreal, QC, Canada.
- 30. Keynote Address. (Oct 2018). "Intraoperative Hypotension: a Masked Assassin". Canadian Critical Care Experts Forum, Montreal, QC, Canada.

U.S. National and International

- 31. Lecture. (March 2024). Clinical applications of artificial intelligence: clinical workflow. World Congress of Anaesthesiologists. Singapore.
- 32. Lecture. (September 2023). The intersection between age, sex, frailty and outcomes after cardiovascular interventions. Modifying Cardiovascular Ageing: from Old Cells to Elderly Patients. Halle, Germany.
- 33. Keynote Lecture. (June 2023). How to harness data to its fullest potential in research and patient care. AIMed Global. San Diego, CA, USA.
- 34. Lecture. (Jan 2023). Big Data in Cardiovascular Medicine. Frontiers in Cardiovascular Science. Stanford, CA, USA.
- 35. Lecture. (Dec 2022). How to Build an AI-Ready Data Infrastructure. AI + Health. Stanford, CA, USA.
- 36. Lecture. (Oct 2022). Hypotension, AKI and MINS. Anesthesia Patient Safety Foundation Consensus Conference on Perioperative Hemodynamic Instability, Hypotension and Perioperative Outcomes. Philadelphia, PA, USA.
- 37. Keynote Lecture. (Jun 2022). "Big data analysis: Answering the next big research questions in coronary surgery." Society of Thoracic Surgeons (STS) Coronary Conference, Ottawa, ON, Canada.
- 38. Lecture. (May 2022). "Deployment of AI in clinical workflow." AIMed Global, San Francisco, CA, USA.
- 39. Lecture. (May 2022). "What do healthcare organizations need to do in order to harness the full potential of their data?" AIMed Global, San Francisco, CA, USA.
- 40. Lecture. (May 2022). "How to Publish Your Research Insight into Abstracts, Papers, Mentors, and Reviewers". Society of Cardiovascular Anesthesiologists Annual Meeting, Palm Springs, CA, USA.
- 41. Moderator. (May 2022). Poster presentations. Society of Cardiovascular Anesthesiologists Annual Meeting, Palm Springs, CA, USA.
- 42. International Keynote. (Nov 2021). Harnessing data to its full potential to enable the clinical application of AI in Canada. AI & Machine Learning in Healthcare, Melbourne, **Australia**.
- 43. Lecture. (Nov 2021). "Friend or Foe: the Right Ventricle in Cardiac Surgery". American Heart Association (AHA) Scientific Session, Boston, MA, USA.
- 44. Moderator. (Nov 2021). "Optimal Long-Term Techniques for Aortic Valve Pathology". AHA Scientific Session, Boston, MA, USA.
- 45. Moderator. (Jun 2021). "Data and Databases". AIMed Imaging, USA (virtual meeting).

- 46. Lecture. (Apr 2021). "Clinical Applications of Artificial Intelligence". Johns Hopkins MedTech Network's AI in Healthcare Lecture Series, Baltimore, MD, USA.
- 47. Lecture. (Mar 2021). "AI in Surgical and Critical Care: Pathway to the New Century". AIMed Surgery and ICU, USA (virtual meeting).
- 48. Keynote Lecture. (May 2020). "Long-term results of PCI vs CABG in patients with ischemic cardiomyopathy". Medstar Hospital Center Interventional Cardiology Conference, Washington, DC, USA (virtual meeting). https://rutherfordmedicine.com/speakers/Louise-Y-Sun
- 49. Workshops and/or Round Tables. (May 2020). "Top 3 AI Papers in Cardiology". AIMed Cardiology, USA. (virtual meeting).
- 50. Lecture. (May 2020). "A critical look at big data for medical AI research." AIMed Cardiology, Laguna Niguel, CA, USA (virtual meeting).
- 51. Lecture. (May 2020) "Big data in cardiovascular research: the joy, the challenges, and what we've learned along the way." AIMed Cardiology, New Port Beach, CA, USA (virtual meeting).

 https://www.youtube.com/watch?v=YnVvIaw3Z7s&list=PLNfg2uekDVxHQjNPZ nXuMoIQrYSIZt5k&index=2&t=0s
- 52. Lecture. (Aug 2019) "Population ageing future perspectives from the University of Ottawa Heart Institute." International Cardiology Meeting, Curitiba, Brazil. Other presenter: Dr. Rob Beanlands.

Visiting Professorships

53. Visiting Professorship. (Apr 2020) "Sex differences in cardiac surgery outcomes." University of Manitoba Cardiovascular Sciences Program, Winnipeg, Canada.

XIV. TRAINEES

Mentoring Activities

Michig Act	ivities
2023	Mentor, Women in Cardiothoracic Anesthesia Scientific Writing Pods
	Mentee: Michele Sumler
2023	Research Mentor, Bola Faloye (Associate Professor of Anesthesiology, Emory University School of
	Medicine, USA)
2022	Speaker, Canadian Cardiovascular Society Trainee Session on Health Services Research
2022 -	Mentor, The Canadian Cardiovascular Future Leaders Program, Canadian Cardiovascular Society
2021 - 2022	Research Mentor, Dr. Habib Jabagi (Staff Cardiac Surgeon, Valley Health System, USA)
2021	Mentor, Society of Cardiovascular Anesthesiologists
2021	Mentor, Johns Hopkins MedTech Network, Johns Hopkins University School of Engineering
2016	Writer, Competence by Design Learning Modules, Course Development, University of Ottawa
2015 - 2019	Mentor, Resident Mentorship Program, University of Ottawa
2012	Speaker, Anesthesia Resident Career Planning and Mentorship Event, University of Ottawa

Trainee Supervision

Completed

Principal Supervisor 19 Post-doctorate

3 Doctorate

6 Doctorate Equivalent

4 Bachelor's

Co-Supervisor 3 Post-doctorate

1 Doctorate Equivalent

1 Bachelor's

In Progress

Principal Supervisor 6 Post-doctorate

1 Doctorate

4 Doctorate Equivalent

1 Bachelor's

Co-Supervisor 1 Post-doctorate

Supervision detail:

Jessica Dawson (CA1), Association of race, ethnicity and socioeconomic class with outcomes after heart transplantation. Principal Supervisor, February 2023 –

Teresa Nguyen (CA2), Variation of mechanical circulatory support use across the United States. Principal Supervisor, February 2023 –

Jacquelyn Nakamura (CA1), *Lumbar drain complication rates in patients undergoing open and endovascular thoracic aortic aneurysm repair*. Principal Supervisor, February 2023 –

Andrew Tran (MS1), *Impact of surgical delays and incrementing case acuity on patient outcomes within a universal health care system*, Principal Supervisor, December 2021 –

Kenza Rahmouni El Idrissi (PGY-2 Cardiac Surgery), *Pulmonary pulsatility index as a predictor of recurrence-free survival after mitral valve repair*, Co-Supervisor, November 2021 –

Dominique Vervoort (PhD student), Coronary revascularization outcomes, Principal Supervisor, November 2021 –

Alexandra Fottinger (Clinical Fellow – Critical Care), *Derivation and validation of clinical models to predict hospital length of stay after cardiac surgery*, Principal Supervisor, July 2021 –

Karanpreet Bath (MS3), Qualitative study on cardiac operating teamwork, Principal Supervisor, June 2021 -

Salwa Zghebi (Postdoctoral Research Fellow), *Derivation and External Validation of a Clinical Model to Predict Heart Failure Onset in Patients with Incident Diabetes*, Principal Supervisor, April 2021 –

Alex Nantsios (PGY-3 Cardiac Surgery), *Achieving a consensus-based definition for perioperative right ventricular failure*, Principal Supervisor, May 2020 – March 2022.

Tuba Buyuktepe (Undergraduate), *A review of telehealth and telemedicine strategies in patients with heart failure*, Principal Supervisor, May 2021 – August 2021.

Akaash Ratra (Undergraduate), *Design and implementation of digital health applications in cardiology and cardiac surgery*, Principal Supervisor, May 2021 – April 2022.

Felicity Lee (Clinical Fellow – Cardiology) (Post-doctorate), Cardiology *Impact of specialist referral on outcomes in women and men with newly diagnosed heart failure*, Principal Supervisor, September 2020 – February 2022.

John O'Connor (Clinical Fellow - Cardiac Anesthesia) (Post-doctorate), Anesthesia *Impact of Anesthesiologist Handover on Patient Outcomes after Major Cardiac Surgery*, Principal Supervisor, June 2020 – February 2022.

Yannick MacMillan (MS2) (Doctorate Equivalent), Faculty of Medicine *IGFBP7* as a Biomarker of Perioperative Right Ventricular Injury, Principal Supervisor, March 2020 – May 2022.

Nour Elmestekawy (Undergraduate student), Principal Supervisor, September 2019 – November 2021.

Alice Blet (Post-doctorate), Post-doctoral Research Fellow *Trans-Atlantic Biomarker Collaboratory for Acute Heart Failure/Shock Prognosis and Therapy*, Co-Supervisor, September 2019 – August 2020.

Stewart Spence (PGY-1 Internal Medicine) (Post-doctorate), Internal Medicine Residency *Impact of frailty on long-term outcomes after major cardiac surgery*, Principal Supervisor, July 2019 – June 2020

Vanja Ristovic (PGY-2 Anesthesia) (Post-doctorate), Anesthesia Residency Association of intraoperative hypotension and in-hospital mortality after major cardiac surgery, Principal Supervisor, April 2019 – June 2020

Mimi Deng (MS2) (Doctorate Equivalent), Faculty of Medicine *Impact of physician and patient sex on outcomes after cardiac surgery – a systematic review*, Principal Supervisor, October 2018 – March 2020

Katina Zheng (MS2) (Doctorate Equivalent), Faculty of Medicine *Impact of physician and patient sex on outcomes after cardiac surgery – a systematic review*, Principal Supervisor, October 2018 – March 2020

Sarah Leir (PGY-1 Anesthesia Resident) (Post-doctorate), Anesthesia Residency *Sex and Gender Biases in Medical Education*, Principal Supervisor, September 2018 – June 2021

Yukihiro Hayatsu (Clinical Fellow - Cardiac Surgery) (Post-doctorate), Cardiac Surgery *Long-Term Outcomes After Single Versus Multiple Arterial Coronary Grafting in Patients with Reduced Renal Function*, Principal Supervisor, October 2018 – August 2019

Antoine Kimmoun (Research Fellow) (Post-doctorate), Postdoctoral Research Fellow *Impact of Ethnicity on Long-Term Outcomes After Hospitalization for Acute Heart Failure*, Principal Supervisor, September 2018 – May 2019

Kogi Takagi (Postdoctoral fellow) (Post-doctorate), Postdoctoral Research Fellowship *Ethnic differences in outcomes after hospital admission for acute heart failure in Ontario*, Principal Supervisor, September 2018 – May 2019

Amy Johnston (Doctorate), Prospective PhD Student Sex Differences in Long-Term Survival After Hospital Discharge From Major Cardiac Surgery: A Population-Based Cohort Study, Principal Supervisor, August 2018 – May 2019

Habib Jagabi (PGY-4 Cardiac Surgery) (Post-doctorate), Cardiac Surgery *An Etiological Study of Perioperative Strokes*, Principal Supervisor, July 2018 – June 2021

Riina Kandolin (Cardiology Fellow) (Post-doctorate), Cardiology *Novel Predictors of Perioperative Right Ventricular Failure*, Principal Supervisor, February 2018 – December 2019

Nadia Clarizia (PGY-4 Cardiac Surgery) (Post-doctorate), Cardiac Surgery *Determinants of Left Ventricular Function Recovery After Revascularization: a Retrospective Cohort Study*, Principal Supervisor, February 2018 – Dec 2019

George Wharmby (PGY-1 Anesthesia) (Post-doctorate), Anesthesia Residency *LV Functional Recovery Post Cardiac Surgery*, Principal Supervisor, November 2017 – June 2021

Sonya Hui (MD/PhD student) (Doctorate), Postdoctoral Research Association of genetic risk score with outcomes after revascularization in patients with multi-vessel coronary artery disease, Co-Supervisor, August 2017 – 2020

Janet Ngu (PGY-4 Cardiac Surgery Resident) (Post-doctorate), Cardiac Surgery 1. Association of Intraoperative Hypotension and Acute Kidney Injury Following Major Cardiac Surgery. 2. Temporal Pattern and Outcomes of Left Ventricular Recovery after Revascularization - a Systematic Review and Meta-analysis 3. Goal-Directed Therapy for Prevention of Cardiac Surgery Associated Acute Kidney Injury (PREVENT-AKI): A Randomized Controlled Trial, Principal Supervisor, January 2017 – June 2019

David Harnett (Clinical Fellow - Cardiology) (Post-doctorate), Cardiology *Left atrial appendage velocity as a predictor of stroke after cardiac surgery*, Co-Supervisor, July 2018 – April 2019

Andrew Moeller (Cardiology Fellow) (Post-doctorate), Cardiology Assessing Clinical Prevalence and Significance of Hyperkalemia in Patients with Heart Failure with Reduced Ejection Fraction, Co-Supervisor, April 2018 – April 2019

Dylan DeMarco (MS2) (Doctorate Equivalent), Faculty of Medicine *Determinants of Left Ventricular Function Recovery After Revascularization: a Retrospective Cohort Study*, Principal Supervisor, February 2018 – August 2018

Peter Vho (PGY-1 Cardiac Surgery) (Post-doctorate), Cardiac Surgery *Temporal Pattern and Outcomes of Left Ventricular Recovery Post Revascularization - a Systematic Review and Meta-Analysis*, Principal Supervisor, January 2018 – May 2018

Jasjit Singh (MS4) (Doctorate Equivalent), Faculty of Medicine *Influence of gender on cardiac referral – a scoping review*, Principal Supervisor, December 2017 – May 2019

Jason Zelt (MD/PhD student) (Doctorate), Faculty of Medicine *Biomarkers in the Prediction of Right Ventricular Failure Post Cardiac Surgery*, Principal Supervisor, November 2017 – December 2018

Tasuku Terada (Postdoctoral Fellow) (Post-doctorate), Postdoctoral Research Fellow *Prehabilitation in patients undergoing elective cardiac surgery*, Co-Supervisor, September 2017 – July 2018

Emma Lindale (Bachelor's), Undergraduate Student *Polygenic risk score in the prediction and prognostication of patients with coronary artery disease*, Co-Supervisor, June 2017 – February 2018

Ming Guo (PGY-2 Cardiac Surgery Resident) (Post-doctorate), Cardiac Surgery *Temporal Pattern and Outcomes of Left Ventricular Recovery after Revascularization - a Systematic Review and Meta-analysis*, Principal Supervisor, May 2017 – December 2017

Jillian Rodger (Bachelor's), Undergraduate Student 1. Sex-Based Differences in Access to Care in Heart Failure
Patients - A Systematic Review 2. Temporal Pattern and Outcomes of Left Ventricular Recovery Post
Revascularization, Principal Supervisor, December 2016 – August 2019

Shona Philip (PGY-1 Internal Medicine Resident) (Post-doctorate), Internal Medicine Residency *Sex-Based Differences in Access to Care in Heart Failure Patients - A Systematic Review*, Principal Supervisor, December 2016 – June 2017

Elizabeth Chan (PGY-1 Internal Medicine Resident) (Post-doctorate), Internal Medicine Sex-Based Differences in Access to Care in Heart Failure Patients - A Systematic Review, Principal Supervisor, June 2016 – May 2019

Donna Kimmaliardjuk (PGY-2 Cardiac Surgery Resident) (Post-doctorate), Cardiac Surgery Residency *Pulmonary Artery Pulsatility Index as a Novel Predictor of Perioperative Right Ventricular Failure*, Principal Supervisor, January 2016 – December 2016

Asadollah Mir Ghassemi (PGY-4 Anesthesia Resident) (Post-doctorate), Anesthesiology *Pulmonary Artery Pulsatility Index as a Novel Predictor of Perioperative Right Ventricular Failure*, Principal Supervisor, May 2015 – April 2017

Amy Chung (MS1) (Doctorate Equivalent), Faculty of Medicine *Association of Intraoperative Hypotension and Cerebrovascular Accidents Post Cardiac Surgery*, Principal Supervisor, February 2015 – June 2016

Courses Taught:

Undergraduate Courses

Honours BSc Thesis Project (HTHSCI 3H06) McMaster University, Ontario. September, 2021 – April, 2022 Number of Students: 1

EBM Evidence-Based Medicine Series University of Ottawa, Ontario. October, 2021 – October, 2021 Number of Students: 8

 $Epidemiology\ University\ of\ Ottawa,\ Ontario.\ September,\ 2021-September,\ 2021$

Number of Students: 8

Biostatistics University of Ottawa, Ontario. January, 2021 – January, 2021

Number of Students: 8

EBM Evidence-Based Medicine Series University of Ottawa, Ontario. October, 2020 – October, 2020 Number of Students: 8

EBM Evidence-Based Medicine Series University of Ottawa, Ontario. October, 2019 – January, 2020

Number of Students: 8

EBM Evidence-Based Medicine Series University of Ottawa, Ontario. April, 2019 - April, 2019

Number of Students: 8

Graduate Courses

Guest Faculty, American Board of Artificial Intelligence in Medicine (ABAIM). "ABAIM Review Course". ABAIM, U.S.A. May 2021.

Number of Students: 28

Guest Lecture, School of Epidemiology and Public Health. "Sex Difference in Heart Failure Outcomes in Ambulatory and Cardiac Surgical Patients in Ontario", U of Ottawa, Ontario. October, 2018 – October, 2018.

Number of Students: 30

Anesthesia Residency, Anesthesia Management of Adults with Congenital Heart Disease, University of Ottawa, Ontario. January, 2017

Number of Students: 25

Anesthesia Residency, Resident Problem-Based Learning Modules University of Ottawa, Ontario. February, 2011 -

February, 2013

Number of Students: 12