

UBC Cardiology Research News

Reporting April - June 2019

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Message from Research Team

Dear Colleagues,

It is a pleasure to provide a summary of the last quarter's research achievements in Cardiology. Kudos to Drs. Humphries, Laksman, Leipsic, Saw and Wood for the national and international recognition received as summarized on our cover page. These members are joined by several others providing invited lectures across the province, across Canada, throughout the USA and even as far away as Hong Kong. We also showcase the research mentorship of residents/fellows by our faculty who have supervised projects that were celebrated with awards from the Department of Medicine for Dr. Dylan Stanger (supervised by Dr. Fordyce) and Dr. Chris Cheung (supervised by Dr. Jason Andrade).

It was a busy time for the CAPP Pilot Project competition and we were fortunate to be able to make three awards this time (Drs. Deyell, Fordyce and Grewal). We are indebted not only to the internal primary and secondary reviewers who provide detailed critiques but also to a large number of colleagues across the country who help us determine relative ranking and quality of the submitted projects. Congratulations are also due for external awards received by Drs. Hawkins and Fordyce. And we also showcase a special competition fostered by the enlightened and progressive mechanism of utilizing some of the clinical trials research overhead for supporting new faculty start-up needs through the Centre for Heart and Lung Health. One of these competitive awards went this year to Dr. Christina Luong who we welcome as our newest faculty member.

We are developing much greater strength in submitting peer-reviewed grants of high calibre through the oversight provided by Dr. Sidhu. This successful activity has shown us how much more we need to do to create even more infrastructure to facilitate the translation of good research ideas into competitive projects and then to help manage all the tasks required to successfully complete projects. In conjunction with Dr. Krahn's Executive Committee and with the Finance Committee headed by Dr. Boone, we are developing further strategies to determine how to best support more personnel that could be helpful in everything from ethics, common CV's and literature searches to financial management and personnel management. Our vision is to kick-start individuals with these supports from divisional resources and through a divisional pool of research facilitators while fostering more programs under the leadership of PI's who are successful in funding their ideas and who can then transition to hiring dedicated personnel focussed on their expanding research programs. How to best balance this hybrid system of research support and how to best fund it will require much more work. But it is exciting work and we look forward to updating the division on solutions and progress in these areas.

Sincerely

G.B. John Mancini

Director of Research, UBC Division of Cardiology

Marc Deyell

Associate Director of Research, UBC Division of Cardiology

Vishaldeep Sidhu

Research Manager, UBC Division of Cardiology

Awards & Distinctions

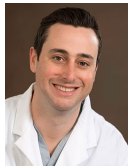
Humphries, Karin

Providence Health Care Research and Mission Award



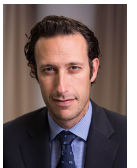
Laksman, Zachary

Top 40 under 40



Leipsic, Jonathan

Society of Cardiovascular Tomography 2019 Gold Award winner



Saw, Jacqueline

4 co-author publications in the June Issue of JACC Cardiovascular Interventions



Wood, David

2019 Luminary Award, Complex Cardiovascular Catheter Therapeutics (C3) Global Summit, Orlando



Cardiology Resident day award winners

Stanger, Dylan

Best Podium: "Door-to-Targeted Temperature Management Initiation Time and Outcomes in Out-of-hospital Cardiac Arrest: Insight from the CCC Trial"

Supervisor - Dr. Chris Fordyce

Cardiology Resident day award winners (contd.)

Cheung, Chris

Best Poster: Dr. Chris Cheung " Standard versus Intensive Monitoring Post-Myocardial Infarction Looking for New-Onset Atrial Fibrillation (SIMPL-AF) – A Randomized Controlled Trial."

Supervisor - Dr. Jason Andrade

Grants Awarded

Deyell, M

- "Treatment of Refractory Ventricular Tachycardia Using Stereotactic Ablative Radiotherapy" CAPP Pilot Grant Competition

Fordyce, C

- "Epidemiology and Management of Out-of-hospital Cardiac Arrest in Contemporary Cardiac Intensive Care Units: Insights from the Critical Care Cardiology Trials Network" CAPP Pilot Grant Competition

Fordyce, C

- "NOAC renal dose adjustment formulae and outcomes" Bayer Industry funds

Grewal, J

- "Echocardiographic Predictors of Long Term Outcomes in Patients with Severe Isolated Tricuspid Regurgitation" CAPP Pilot Grant Competition

Hawkins, N and Fordyce, C

- "Opportunities to prevent sudden cardiac death: BC Cardiac Arrest Registry" 2019 CCS-CANet Early Career Atrial Fibrillation and Arrhythmia (CCS-CANet ECA3) award competition

Hawkins, N and Ho, K

- "Predicting response to treatment in patients with Atrial Fibrillation using a data science approach" Huawei-UBC Data Science Grant funds

Luong, Christina

- "Ischemic HEART disease evaluation on echocardiogram: Machine Learning detection and Quantification (IHEART-MLQ)" 2019 CHLH Early Career Investigator Award

Invited Presentations

Deyell, Marc

- "Canadian Cardiovascular Society Guidelines for the Management of Ventricular Tachycardia and Fibrillation". April 13, 2019. Canadian VT Symposium, Vancouver.

Krahn, Andrew

- "Advances in the Genetics of Inherited Heart Disease". April 4, 2019 ACMG Clinical Genetics meeting Seattle, Washington.
- "Inherited Cardiac Arrhythmias: The Role of Genetic Testing" April 6, 2019 Advanced Electrophysiology Conference, Washington DC.
- "How to Avoid and Manage CIED Implantation-Related Complications" May 6-20th Anniverasry ARVC Symposium, Baltimore MD.
- "AVRC Registry/Biobank", "Update From The Prevention Of Arrhythmia Device Infection Trial (padit); Development Of The Padit Infection Risk Score", "Diagnostics", "From Insertable Loop Recorder to Insertable Cardiac Monitor and Beyond", "Device Troubleshooting - Understanding the Post Implant Nuances!" May 8- 10, Heart Rhythm Society Meeting, San Francisco, CA.

Laksman, Zachary

- Speaker and Coordinator, Canada's First Annual Subcutaneous ICD Fellows Course, May 2019, Toronto, ON.
- "The future of Antiarrhythmics", May 8- 10, Heart Rhythm Society Meeting, San Francisco, CA.
- "High throughput screening", BC Regenerative Medicine Symposium, May 15, 2019, Vancouver BC.
- "Replacing animal models with stem cell disease modelling in atrial fibrillation", May, 2019, US National Academies of Sciences, Engineering and Medicine, Washington DC.
- "The future of Personalized Medicine, Genomics and Innovation", May 2019, 19th Annual International Health Care Summit, Kelowna, BC.
- "Cardiac Arrest and Sudden Cardiac Death in your Community", "Genetic Testing in 2019: Could it be any more complex?" June 2019, Hearts in Rhythm Organization, Kelowna, BC.

Mancini, G.B. John

- "Can we eliminate LDL related cardiovascular risk?" Royal Jubilee Hospital Cardiology Division Journal Club May 30, 2019, Victoria BC
- "New paradigms in CAD management" Academic Grand Rounds, Royal Jubilee Hospital Cardiology Division Journal Club May 31, 2019, Victoria BC

Saw, Jacqueline

- "LAA closure with Amulet device", "ICE guidance for LAA Closure" Prince of Wales Hospital, Hong Kong, April 2019.

- “CT imaging for LAA Closure”, “ICE guidance for LAA Closure”, Queen Elizabeth Hospital, April 2019.
- “Periprocedural imaging for LAA Closure”, “Learning more about LAA Closure” Heart Rhythm Society Meeting, San Francisco, CA, May 2019.
- “SCAD: A heart condition or systemic disorder?”, EuroPCR, Paris May 2019.
- “Antithrombotic therapy and surveillance after LAAC”, TVT Chicago, June 2019.

Sedlak, Tara

- “Heart Disease in Women: Ms. Understood”, May 2019, Telus Women’s Health Symposium, Vancouver, BC.

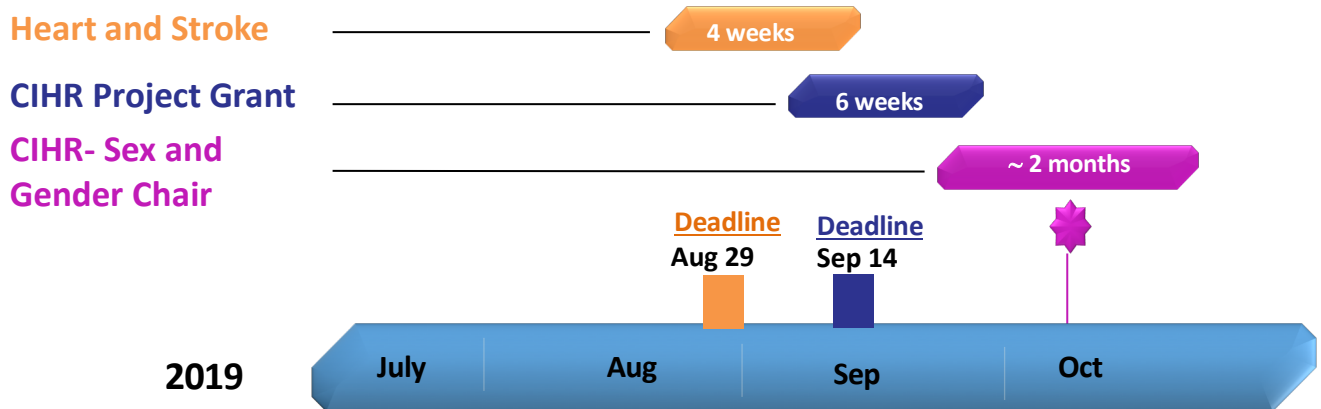
Tsang, Teresa

- “Automatic biplane left ventricular ejection fraction estimation with mobile point-of-care ultrasound using multitask learning and adversarial training”, The 10th International Conference on Information Processing in Computer-Assisted Interventions, Rennes, France, June, 2019.

Wood, David

- “The Latest Clinical Trials of TAVR vs. SAVR: The Essentials”, “Transfemoral TAVR as the Default Procedure”, “TAVR-How it All Started” Complex Cardiovascular Catheter Therapeutics (C3)- Advanced Endovascular and Coronary Intervention Global Summit Conference, Orlando, June 24, 2019.
- “When Transfemoral Access is Problematic – Facilitation with Intravascular Balloon Lithotripsy”, “Conduction Block After TAVR: Do I Discharge Early, Monitor, Invasively Investigate or Pace?” June 13, 2019, TVT Chicago.
- “Coronary Revascularization: Before, During or After TAVR?”, June 24, 2019, SCAI, Las Vegas.

Upcoming Grant Competitions



PUBLICATIONS

1. Al'Aref SJ, Anchouche K, Singh G, Slomka PJ, Kolli KK, Kumar A, Pandey M, Maliakal G, van Rosendael AR, Beecy AN, Berman DS, **Leipsic J**, Nieman K, Andreini D, Pontone G, Schoepf UJ, Shaw LJ, Chang HJ, Narula J, Bax JJ, Guan Y, Min JK. Clinical applications of machine learning in cardiovascular disease and its relevance to cardiac imaging. *Eur Heart J*. 2019 Jun 21;40(24):1975-1986. doi: 10.1093/eurheartj/ehy404. PubMed PMID: 30060039.
2. Amat-Santos IJ, Gutiérrez H, Sathanathan J, **Webb JG**. Fracture of small Mitroflow® aortic bioprosthesis following valve-in-valve transcatheter aortic valve replacement with ACURATE neo valve-From bench testing to clinical practice. *Catheter Cardiovasc Interv*. 2019 May 29. doi: 10.1002/ccd.28347. [Epub ahead of print] PubMed PMID: 31140682.
3. Aminian A, Al Hage E, **Saw J**. Are Patients With Long-Standing Persistent Atrial Fibrillation at Higher Risk With Left Atrial Appendage Occlusion? *JACC Cardiovasc Interv*. 2019 Jun 10;12(11):1027-1029. doi: 10.1016/j.jcin.2019.04.022. PubMed PMID: 31171277.
4. **Andrade JG**, Macle L. Refining the prediction of stroke in atrial fibrillation: An elusive endeavor. *Heart Rhythm*. 2019 Jun;16(6):827-828. doi: 10.1016/j.hrthm.2018.12.012. Epub 2018 Dec 18. PubMed PMID: 30576878.
5. Attinger-Toller A, Htun NM, Murdoch D, Perlman GY, Alenezi A, Sathanathan J, Blanke P, **Leipsic J**, Thompson C, Ye J, Cheung A, **Wood D**, **Webb JG**. Transcatheter aortic valve-in-valve implantation for failed surgical bioprosthetic valves. A minimalist approach without contrast aortography or echocardiographic guidance. *Catheter Cardiovasc Interv*. 2019 Apr 30. doi: 10.1002/ccd.28299. [Epub ahead of print] PubMed PMID: 31038290.
6. Ayas NT, Hirsch Allen AJ, Fox N, Peres B, Mehrtash M, **Humphries KH**, Jen R, Taylor CM, van Eeden SF. C-Reactive Protein Levels and the Risk of Incident Cardiovascular and Cerebrovascular Events in Patients with Obstructive Sleep Apnea. *Lung*. 2019 Aug;197(4):459-464. doi: 10.1007/s00408-019-00237-0. Epub 2019 May 14. PubMed PMID: 31089857.
7. Badhwar V, Sorajja P, Duncan A, Thourani V, Schaefer U, Grayburn P, Dumonteil N, Babaliaros V, Garatti A, **Leipsic J**, Chuang M, Blanke P, Muller D. Mitral Regurgitation Severity Predicts One Year Therapeutic Benefit of Tendyne Transcatheter Mitral Valve Implantation. *EuroIntervention*. 2019 May 22. pii: EIJ-D-19-00333. doi: 10.4244/EIJ-D-19-00333. [Epub ahead of print] PubMed PMID: 31130525.
8. Bax JJ, Delgado V, Hahn RT, **Leipsic J**, Min JK, Grayburn P, Sondergaard L, Yoon SH, Windecker S. Transcatheter Aortic Valve Replacement: Role of Multimodality Imaging in Common and Complex Clinical Scenarios. *JACC Cardiovasc Imaging*. 2019 May 9. pii: S1936-878X(19)30251-7. doi: 10.1016/j.jcmg.2018.10.037. [Epub ahead of print] Review. PubMed PMID: 31103575.
9. Behnami D, Luong C, Girgis H, Hawley D, Rohling R, Gin K, Abolmaesumi P, **Tsang T**. Artificial Intelligence Assessment of Left Ventricular Systolic Function in Patients

- with Wide Range Ejection Fraction. *Journal of the American Society of Echocardiography* 2019; 32(6):121-122.
10. **Cairns JA**, Eikelboom JW, Shestakovska O, Yusuf S, DeMets D. Monitoring Emerging Data From the COMPASS Trial of an Antithrombotic Agent. *J Am Coll Cardiol*. 2019 Jun 4;73(21):2769-2772. doi: 10.1016/j.jacc.2019.03.479. PubMed PMID: 31146821.
 11. Cassels M, Moulson N, Regan J, MacDonald M, **Isserow S**, Johri AM, **McKinney J**. Point-of-Care Ultrasound as a Component of Preparticipation Screening of Athletes: A Systematic Review. *J Ultrasound Med*. 2019 May 12. doi: 10.1002/jum.15021. [Epub ahead of print] Review. PubMed PMID: 31081230.
 12. Cheung CC, Healey JS, Hamilton R, Spears D, Gollob MH, Mellor G, Steinberg C, Sanatani S, **Laksman ZW**, **Krahn AD**. Phospholamban cardiomyopathy: a Canadian perspective on a unique population. *Neth Heart J*. 2019 Apr;27(4):208-213. doi: 10.1007/s12471-019-1247-0. PubMed PMID: 30806910; PubMed Central PMCID: PMC6439019.
 13. Diamant MJ, **Virani SA**, MacKenzie WJ, **Ignaszewski A**, **Toma M**, **Hawkins NM**. Medical therapy doses at hospital discharge in patients with existing and de novo heart failure. *ESC Heart Fail*. 2019 Jun 20. doi: 10.1002/ehf2.12454. [Epub ahead of print] PubMed PMID: 31218850.
 14. Duncan A, Moat N, Simonato M, de Weger A, Kempfert J, Eggebrecht H, Walton A, Hellig F, Kornowski R, Spargias K, Mendiz O, Makkar R, Guerrero M, Rihal C, George I, Don C, Iadanza A, Bapat V, Welsh R, Wijeyesundera HC, **Wood D**, Sathananthan J, Danenberg H, Maisano F, Garcia S, Gafoor S, Nombela-Franco L, Cobiella J, Dvir D. Outcomes Following Transcatheter Aortic Valve Replacement for Degenerative Stentless Versus Stented Bioprostheses. *JACC Cardiovasc Interv*. 2019 Jul 8;12(13):1256-1263. doi: 10.1016/j.jcin.2019.02.036. Epub 2019 Jun 12. PubMed PMID: 31202944.
 15. Duong M, Islam S, Rangarajan S, Leong D, Kurmi O, Teo K, Killian K, Dagenais G, **Lear S**, Wielgosz A, Nair S, Mohan V, Mony P, Gupta R, Kumar R, Rahman O, Yusoff K, du Plessis JL, Igumbor EU, Chifamba J, Li W, Lu Y, Zhi F, Yan R, Iqbal R, Ismail N, Zatonska K, Karsidag K, Rosengren A, Bahonar A, Yusufali A, Lamelas PM, Avezum A, Lopez-Jaramillo P, Lanas F, O'Byrne PM, Yusuf S; PURE investigators. Mortality and cardiovascular and respiratory morbidity in individuals with impaired FEV(1) (PURE): an international, community-based cohort study. *Lancet Glob Health*. 2019 May;7(5):e613-e623. doi: 10.1016/S2214-109X(19)30070-1. PubMed PMID: 31000131.
 16. Durand M, Lacaria K, Sidsworth M, **Davis MK**, Sanford D. Management of cardiovascular health in acute leukemia: a national survey. *Leuk Lymphoma*. 2019 May 21:1-11. doi: 10.1080/10428194.2019.1613539. [Epub ahead of print] PubMed PMID: 31111757.
 17. Elbaz-Greener G, Qiu F, **Webb JG**, Henning KA, Ko DT, Czarnecki A, Roifman I, Austin PC, Wijeyesundera HC. Profiling Hospital Performance on the Basis of Readmission After Transcatheter Aortic Valve Replacement in Ontario, Canada. *J Am Heart Assoc*. 2019 Jun 18;8(12):e012355. doi: 10.1161/JAHA.119.012355. Epub 2019 Jun 5. PubMed PMID: 31165666.
 18. Essebag V, Alturki A, Proietti R, Healey JS, Wells GA, Verma A, **Krahn AD**, Simpson CS, Ayala-Paredes F, Coutu B, Leather R, Ahmad K, Toal S, Sapp J, Sturmer M, Kavanagh K, Crystal E, Leiria TLL, Seifer C, Rinne C, Birnie D; BRUISE CONTROL

- Investigators. Concomitant anti-platelet therapy in warfarin-treated patients undergoing cardiac rhythm device implantation: A secondary analysis of the BRUISE CONTROL trial. *Int J Cardiol.* 2019 Aug 1;288:87-93. doi: 10.1016/j.ijcard.2019.04.066. Epub 2019 Apr 26. PubMed PMID: 31056413.
19. Foldyna B, Udelson JE, Karády J, Banerji D, Lu MT, Mayrhofer T, Bittner DO, Meyersohn NM, Emami H, Genders TSS, **Fordyce CB**, Ferencik M, Douglas PS, Hoffmann U. Pretest probability for patients with suspected obstructive coronary artery disease: re-evaluating Diamond-Forrester for the contemporary era and clinical implications: insights from the PROMISE trial. *Eur Heart J Cardiovasc Imaging.* 2019 May 1;20(5):574-581. doi: 10.1093/ehjci/jez182. PubMed PMID: 30520944; PubMed Central PMCID: PMC6477645.
 20. **Fordyce CB**, Roe MT, Pierre C, Hinkley T, Hamre G, Tenaerts P, McCall J, Topping JD. Trends in clinical trial investigator workforce and turnover: An analysis of the U.S. FDA 1572 BMIS database. *Contemp Clin Trials Commun.* 2019 May 21;15:100380. doi: 10.1016/j.conctc.2019.100380. eCollection 2019 Sep. PubMed PMID: 31193608; PubMed Central PMCID: PMC6536616.
 21. Fowokan A, Punthakee Z, Waddell C, Rosin M, Morrison KM, Gupta M, Rangarajan S, Teo K, **Lear S**. Multifactorial correlates of blood pressure in South Asian children in Canada: a cross-sectional study. *BMJ Open.* 2019 Apr 8;9(4):e027844. doi: 10.1136/bmjopen-2018-027844. PubMed PMID: 30962241; PubMed Central PMCID: PMC6500289.
 22. Fung A, Moulson N, Balthazaar S, Girgis, H, Van Woudenberg N, Abolmaesumi P, Luong C, Gin K, Jue J, Tsang M, Nair P, **Tsang TSM**. Artificial intelligence application for assessing point-of-care ultrasound image quality. *J Am Soc Echocardiogr* 2019;32(6):122.
 23. Gilhofer TS, **Saw J**. Spontaneous coronary artery dissection: a review of complications and management strategies. *Expert Rev Cardiovasc Ther.* 2019 Apr;17(4):275-291. doi: 10.1080/14779072.2019.1598261. Epub 2019 Apr 8. Review. PubMed PMID: 30957570.
 24. Girgis H, Jafari M, Liao Z, Rohling R, Gin K, Abolmaesumi P, **Tsang T**. Assessment of Left Ventricular Ejection Fraction: The Present and Future. *J Am Soc Echocardiogr* 2019;32(6):120-121.
 25. Gnanenthiran SR, Naoum C, **Leipsic JA**, Achenbach S, Al-Mallah MH, Andrieni D, Bax JJ, Berman DS, Budoff MJ, Cademartiri F, Callister TQ, Chang HJ, Chinnaiyan K, Chow BJW, Cury RC, DeLago A, Feuchtner G, Hadamitzky M, Hausleiter J, Kaufman PA, Kim YJ, Maffei E, Marques H, de Araújo Gonçalves P, Pontone G, Raff GL, Rubinshtein R, Shaw LJ, Villines TC, Gransar H, Lu Y, Jones EC, Peña JM, Lin FY, Kritharides L, Min JK. Long-term prognostic utility of computed tomography coronary angiography in older populations. *Eur Heart J Cardiovasc Imaging.* 2019 Apr 16. pii: jez067. doi: 10.1093/ehjci/jez067. [Epub ahead of print] PubMed PMID: 30993334.
 26. Greason KL, Blackstone EH, Rajeswaran J, Lowry AM, Svensson LG, **Webb JG**, Tuzcu EM, Smith CR, Makkar RR, Mack MJ, Thourani VH, Kodali SK, Leon MB, Miller DC. Inter- and intrasite variability of mortality and stroke for sites performing both surgical and transcatheter aortic valve replacement for aortic valve stenosis in intermediate-risk patients. *J Thorac Cardiovasc Surg.* 2019 Jun 15. pii: S0022-5223(19)31209-7. doi: 10.1016/j.jtcvs.2019.04.112. [Epub ahead of print] PubMed PMID: 31350027.

27. Grewal JS, Morisset J, Fisher JH, Churg AM, Bilawich AM, Ellis J, English JC, Hague CJ, Khalil N, **Leipsic J, Mayo J**, Muller NL, Murphy D, Wright JL, Ryerson CJ. Role of a Regional Multidisciplinary Conference in the Diagnosis of Interstitial Lung Disease. *Ann Am Thorac Soc*. 2019 Apr;16(4):455-462. doi: 10.1513/AnnalsATS.201811-794OC. PubMed PMID: 30608873.
28. Grunau B, Kawano T, Scheuermeyer FX, Drennan I, **Fordyce CB**, van Diepen S, Reynolds J, Lin S, Christenson J. The Association of the Average Epinephrine Dosing Interval and Survival With Favorable Neurologic Status at Hospital Discharge in Out-of-Hospital Cardiac Arrest. *Ann Emerg Med*. 2019 Jun 24. pii: S0196-0644(19)30354-3. doi: 10.1016/j.annemergmed.2019.04.031. [Epub ahead of print] PubMed PMID: 31248676.
29. Hensey M, Daniels D, **Wood D, Webb JG**. Early experience with a purpose-designed temporary pacing guidewire for transcatheter valve implantation. *EuroIntervention*. 2019 Apr 30. pii: EIJ-D-19-00138. doi: 10.4244/EIJ-D-19-00138. [Epub ahead of print] PubMed PMID: 31036540.
30. Hensey M, Sathananthan J, Murdoch DJ, Alkhodair A, Ye J, Cheung A, Blanke P, **Leipsic J, Wood DA, Webb JG**. Assessment of Updated Society of Thoracic Surgeons Score in Historical PARTNER II Patients. *J Am Coll Cardiol*. 2019 Jun 18;73(23):3032-3034. doi: 10.1016/j.jacc.2019.03.498. PubMed PMID: 31196463.
31. Holmes KR, Fonte TA, Weir-McCall J, Anastasius M, Blanke P, Payne GW, Ellis J, Murphy DT, **Taylor C, Leipsic JA**, Sellers SL. Impact of sublingual nitroglycerin dosage on FFR(CT) assessment and coronary luminal volume-to-myocardial mass ratio. *Eur Radiol*. 2019 Jun 21. doi: 10.1007/s00330-019-06293-7. [Epub ahead of print] PubMed PMID: 31227880.
32. Ihdadiyah AR, Norgaard BL, Gaur S, **Leipsic J**, Nerlekar N, Osawa K, Miyoshi T, Jensen JM, Kimura T, Shiomi H, Erglis A, Jegere S, Oldroyd KG, Botker HE, Seneviratne SK, Achenbach S, Ko BS. Prognostic Value and Risk Continuum of Noninvasive Fractional Flow Reserve Derived from Coronary CT Angiography. *Radiology*. 2019 Aug;292(2):343-351. doi: 10.1148/radiol.2019182264. Epub 2019 Jun 11. PubMed PMID: 31184558.
33. Jafari MH, Girgis H, Van Woudenberg N, Liao Z, Rohling R, Gin K, Abolmaesumi P, **Tsang T**. Automatic biplane left ventricular ejection fraction estimation with mobile point-of-care ultrasound using multi-task learning and adversarial training. *Int J Comput Assist Radiol Surg*. 2019 Jun;14(6):1027-1037. doi: 10.1007/s11548-019-01954-w. Epub 2019 Apr 2. PubMed PMID: 30941679.
34. Kiamanesh O, Larsen JM, Bashir J, **Chakrabarti S**. Mobile subcutaneous implantable cardioverter-defibrillator leads to oversensing and inappropriate shocks. *HeartRhythm Case Rep*. 2019 Apr 18;5(7):371-373. doi: 10.1016/j.hrcr.2019.04.001. eCollection 2019 Jul. PubMed PMID: 31341779; PubMed Central PMCID: PMC6630194.
35. Komatsu I, **Leipsic J, Webb JB**, Blanke P, Mackensen GB, Don CW, McCabe JM, Rumer C, Tan CW, Levin DB, Ramos M, Aldea GS, Reisman M, Wijeyesundera HC, Radhakrishnan S, Sathananthan J, Piazza N, Kornowski R, Dvir D. Imaging of Aortic Valve Cusps Using Commissural Alignment: Guidance for Transcatheter Leaflet Laceration With BASILICA. *JACC Cardiovasc Imaging*. 2019 Jun 8. pii: S1936-878X(19)30453-X. doi: 10.1016/j.jcmg.2019.04.019. [Epub ahead of print] PubMed PMID: 31202758.

36. Landes U, Dvir D, Schoels W, Tron C, Ensminger S, Simonato M, Schäfer U, Bunc M, Aldea GS, Cerillo A, Windecker S, Marzocchi A, Andreas M, Amabile N, **Webb J**, Kornowski R. Transcatheter aortic valve-in-valve implantation in degenerative rapid deployment bioprostheses. *EuroIntervention*. 2019 May 20;15(1):37-43. doi: 10.4244/EIJ-D-18-00752. PubMed PMID: 30777843.
37. Laufs U, Banach M, **Mancini GBJ**, Gaudet D, Bloedon LT, Sterling LR, Kelly S, Stroes ESG. Efficacy and Safety of Bempedoic Acid in Patients With Hypercholesterolemia and Statin Intolerance. *J Am Heart Assoc*. 2019 Apr 2;8(7):e011662. doi: 10.1161/JAHA.118.011662. PubMed PMID: 30922146; PubMed Central PMCID: PMC6509724.
38. Law TK, Wald R, Goldstein M, Karur GR, Ng MY, Wang AYM, Deva DP, Kirpalani A, Wald RM, Kiaii M, **Leipsic J**, Connelly KA, Yan AT. Left Atrial Remodeling Assessed by Cardiac MRI after Conversion from Conventional Hemodialysis to In-Centre Nocturnal Hemodialysis. *J Nephrol*. 2019 Apr;32(2):273-281. doi: 10.1007/s40620-018-0522-2. Epub 2018 Aug 24. PubMed PMID: 30168083.
39. Lee AKY, **Andrade J**, **Hawkins NM**, Alexander G, **Bennett MT**, **Chakrabarti S**, **Laksman ZW**, **Krahn A**, Yeung-Lai-Wah JA, **Deyell MW**. Outcomes of untreated frequent premature ventricular complexes with normal left ventricular function. *Heart*. 2019 May 29. pii: heartjnl-2019-314922. doi: 10.1136/heartjnl-2019-314922. [Epub ahead of print] PubMed PMID: 31142596.
40. Lee JH, Rizvi A, Hartaigh BÓ, Han D, Park MW, Roudsari HM, Stuijzand WJ, Gransar H, Lu Y, Callister TQ, Berman DS, DeLago A, Hadamitzky M, Hausleiter J, Al-Mallah MH, Budoff MJ, Kaufmann PA, Raff GL, Chinnaiyan K, Cademartiri F, Maffei E, Villines TC, Kim YJ, **Leipsic J**, Feuchtner G, Pontone G, Andreini D, Marques H, de Araújo Gonçalves P, Rubinshtein R, Achenbach S, Shaw LJ, Chow BJW, Cury RC, Bax JJ, Chang HJ, Jones EC, Lin FY, Min JK, Peña JM. The Predictive Value of Coronary Artery Calcium Scoring for Major Adverse Cardiac Events According to Renal Function (from the Coronary Computed Tomography Angiography Evaluation for Clinical Outcomes: An International Multicenter [CONFIRM] Registry). *Am J Cardiol*. 2019 May 1;123(9):1435-1442. doi: 10.1016/j.amjcard.2019.01.055. Epub 2019 Feb 10. PubMed PMID: 30850210.
41. Lim DS, Kar S, Spargias K, Kipperman RM, O'Neill WW, Ng MKC, Fam NP, Walters DL, **Webb JG**, Smith RL, Rinaldi MJ, Latib A, Cohen GN, Schäfer U, Marcoff L, Vandrangi P, Verta P, Feldman TE. Transcatheter Valve Repair for Patients With Mitral Regurgitation: 30-Day Results of the CLASP Study. *JACC Cardiovasc Interv*. 2019 Jul 22;12(14):1369-1378. doi: 10.1016/j.jcin.2019.04.034. Epub 2019 Jun 26. PubMed PMID: 31255562.
42. Luong C, Liao Z, Girgis H, Abolmaesumi P, Rohling R, Abdi A, Gin K, Jue J, Yeung D, Szefer E, Thompson D, Tsang M, Lee PK, Nair P, **Tsang T**. Machine Learning Derived Video Quality Analysis and Diagnostic Yield of Transthoracic Echocardiograms. *J Am Soc Echocardiogr* 2019;32 (6):121.
43. Luong CL, **Ong K**, Kaila K, Pellikka PA, **Gin K**, **Tsang TSM**. Focused Cardiac Ultrasonography: Current Applications and Future Directions. *J Ultrasound Med*. 2019 Apr;38(4):865-876. doi: 10.1002/jum.14773. Epub 2018 Aug 26. Review. PubMed PMID: 30146784.
44. Mack MJ, Leon MB, Thourani VH, Makkar R, Kodali SK, Russo M, Kapadia SR, Malaisrie SC, Cohen DJ, Pibarot P, **Leipsic J**, Hahn RT, Blanke P, Williams MR, McCabe JM, Brown DL, Babaliaros V, Goldman S, Szeto WY, Genereux P,

- Pershad A, Pocock SJ, Alu MC, **Webb JG**, Smith CR; PARTNER 3 Investigators. Transcatheter Aortic-Valve Replacement with a Balloon-Expandable Valve in Low-Risk Patients. *N Engl J Med*. 2019 May 2;380(18):1695-1705. doi: 10.1056/NEJMoa1814052. Epub 2019 Mar 16. PubMed PMID: 30883058.
45. Mackay MH, Ratner PA, Veenstra G, Scheuermeyer FX, Grubisic M, **Ramanathan K**, Murray C, **Humphries KH**. Racism Is Not a Factor in Door-to-electrocardiogram Times of Patients with Symptoms of Acute Coronary Syndrome: A Prospective, Observational Study. *Acad Emerg Med*. 2019 May;26(5):491-500. doi: 10.1111/acem.13569. Epub 2018 Oct 21. PubMed PMID: 30222233; PubMed Central PMCID: PMC6563064.
46. Main A, **Saw J**. Percutaneous Coronary Intervention for the Treatment of Spontaneous Coronary Artery Dissection. *Interv Cardiol Clin*. 2019 Apr;8(2):199-208. doi: 10.1016/j.iccl.2018.11.008. Review. PubMed PMID: 30832942.
47. **Mancini GBJ**, Maron DJ, Hartigan PM, Spertus JA, Kostuk WJ, Berman DS, Teo KK, Weintraub WS, Boden WE; COURAGE Trial Research Group. Lifestyle, Glycosylated Hemoglobin A1c, and Survival Among Patients With Stable Ischemic Heart Disease and Diabetes. *J Am Coll Cardiol*. 2019 Apr 30;73(16):2049-2058. doi: 10.1016/j.jacc.2018.11.067. PubMed PMID: 31023428.
48. McGovern E, Voss C, **Brunner NW**, Duncombe S, Harris KC, Hosking MH. Pulmonary artery wall thickness in children with Fontan physiology: an optical coherence tomography case control study. *Cardiol Young*. 2019 Apr;29(4):524-527. doi: 10.1017/S1047951119000362. Epub 2019 Apr 8. PubMed PMID: 30957731.
49. Mehta SR, **Wood DA**, Meeks B, Storey RF, Mehran R, Bainey KR, Nguyen H, Bangdiwala SI, **Cairns JA**; COMPLETE Trial Steering Committee and Investigators. Design and rationale of the COMPLETE trial: A randomized, comparative effectiveness study of complete versus culprit-only percutaneous coronary intervention to treat multivessel coronary artery disease in patients presenting with ST-segment elevation myocardial infarction. *Am Heart J*. 2019 Jun 18;215:157-166. doi: 10.1016/j.ahj.2019.06.006. [Epub ahead of print] PubMed PMID: 31326681.
50. Murdoch DJ, **Webb JG**, Ye J, Sathananthan J, Hensey M, **Wood DA**, Cheung A, **Leipsic J**, Blanke P, Lauck S. Transcatheter Aortic-Valve Replacement - 10 Years Later. *N Engl J Med*. 2019 May 2;380(18):1773-1774. doi: 10.1056/NEJMc1814932. PubMed PMID: 31042832.
51. Nakanishi R, Motoyama S, Leipsic J, Budoff MJ. How accurate is atherosclerosis imaging by coronary computed tomography angiography? *J Cardiovasc Comput Tomogr*. 2019 Jun 15. pii: S1934-5925(19)30093-0. doi: 10.1016/j.jcct.2019.06.005. [Epub ahead of print] Review. PubMed PMID: 31302029.
52. Nazzari H, **Hawkins NM**, Ezekowitz J, Lauck S, Ding L, Polderman J, Yu M, **Boone RH**, Cheung A, Ye J, **Wood D**, **Webb J**, **Toma M**. The Relationship Between Heart-Failure Hospitalization and Mortality in Patients Receiving Transcatheter Aortic Valve Replacement. *Can J Cardiol*. 2019 Apr;35(4):413-421. doi: 10.1016/j.cjca.2018.11.016. Epub 2018 Nov 28. PubMed PMID: 30853134.
53. Nicol ED, Norgaard BL, Blanke P, Ahmadi A, Weir-McCall J, Horvat PM, Han K, Bax JJ, **Leipsic J**. The Future of Cardiovascular Computed Tomography: Advanced Analytics and Clinical Insights. *JACC Cardiovasc Imaging*. 2019

- Jun;12(6):1058-1072. doi: 10.1016/j.jcmg.2018.11.037. Review. PubMed PMID: 31171259.
54. Ong JP, Wald R, Goldstein MB, **Leipsic J**, Kiaii M, Deva DP, Kirpalani A, Jimenez-Juan L, Bello O, Azizi PM, Wald RM, Wright GA, Harel Z, Connelly KA, Yan AT. Left ventricular strain analysis using cardiac magnetic resonance imaging in patients undergoing in-centre nocturnal haemodialysis. *Nephrology (Carlton)*. 2019 May;24(5):557-563. doi: 10.1111/nep.13404. PubMed PMID: 29785733.
 55. Opotowsky AR, Carazo M, Singh MN, Dimopoulos K, Cardona-Estrada DA, Elantably A, Waikar SS, Mc Causland FR, Veldtman G, **Grewal J**, Gray C, Loukas BN, Rajpal S. Creatinine versus cystatin C to estimate glomerular filtration rate in adults with congenital heart disease: Results of the Boston Adult Congenital Heart Disease Biobank. *Am Heart J*. 2019 Aug;214:142-155. doi: 10.1016/j.ahj.2019.04.018. Epub 2019 May 22. PubMed PMID: 31203159.
 56. Peri-Okonny PA, Liu Y, Malaisrie SC, Huded CP, Kapadia S, Thourani VH, Kodali SK, **Webb J**, McAndrew TC, Leon MB, Cohen DJ, Arnold SV. Association of Statin Use and Mortality After Transcatheter Aortic Valve Replacement. *J Am Heart Assoc*. 2019 Apr 16;8(8):e011529. doi: 10.1161/JAHA.118.011529. PubMed PMID: 30947591; PubMed Central PMCID: PMC6507186.
 57. Power D, Schäfer U, Guedeney P, Claessen BE, Sartori S, Sorrentino S, Lefèvre T, Kupatt C, Tchetché D, Dumonteil N, **Webb JG**, Colombo A, Windecker S, Ten Berg JM, Hildick-Smith D, Boekstegers P, Linke A, Tron C, Van Belle E, Asgar AW, Jeger R, Sardella G, Hink U, Husser O, Grube E, Lechthaler I, Wijngaard P, Anthopoulos P, Deliargyris EN, Bernstein D, Hengstenberg C, Mehran R, Dangas GD. Impact of percutaneous closure device type on vascular and bleeding complications after TAVR: A post hoc analysis from the BRAVO-3 randomized trial. *Catheter Cardiovasc Interv*. 2019 Jun 1;93(7):1374-1381. doi: 10.1002/ccd.28295. Epub 2019 May 22. PubMed PMID: 31116908.
 58. Qamar SR, Jalal S, Nicolaou S, **Tsang M**, Gilhofer T, **Saw J**. Comparison of Cardiac Computerized Tomography Angiography and Trans-Esophageal Echocardiography for Device Surveillance After Left Atrial Appendage Closure. *EuroIntervention*. 2019 Jun 18. pii: EIJ-D-18-01107. doi: 10.4244/EIJ-D-18-01107. [Epub ahead of print] PubMed PMID: 31217149.
 59. Rosengren A, Smyth A, Rangarajan S, Ramasundarahettige C, Bangdiwala SI, AlHabib KF, Avezum A, Bengtsson Boström K, Chifamba J, Gulec S, Gupta R, Igumbor EU, Iqbal R, Ismail N, Joseph P, Kaur M, Khatib R, Kruger IM, Lamelas P, Lanas F, **Lear SA**, Li W, Wang C, Quiang D, Wang Y, Lopez-Jaramillo P, Mohammadifard N, Mohan V, Mony PK, Poirier P, Srilatha S, Szuba A, Teo K, Wielgosz A, Yeates KE, Yusuf K, Yusuf R, Yusufali AH, Attaei MW, McKee M, Yusuf S. Socioeconomic status and risk of cardiovascular disease in 20 low-income, middle-income, and high-income countries: the Prospective Urban Rural Epidemiologic (PURE) study. *Lancet Glob Health*. 2019 Jun;7(6):e748-e760. doi: 10.1016/S2214-109X(19)30045-2. Epub 2019 Apr 23. PubMed PMID: 31028013.
 60. Roston TM, Chua D, Lum E, **Krahn AD**. Switching Between β -Blockers: An Empiric Tool for the Cardiovascular Practitioner. *Can J Cardiol*. 2019 Apr; 35(4):539-543. doi: 10.1016/j.cjca.2019.01.013. Epub 2019 Jan 31. PubMed PMID: 30935645.
 61. Sathananthan G, **Grewal J**. The Complex Relationship That Is RV-PA Coupling and Its Relevance to Managing Congenital Heart Disease. *Can J Cardiol*. 2019

- Jul;35(7):816-818. doi: 10.1016/j.cjca.2019.04.027. Epub 2019 May 10. PubMed PMID: 31292078.
62. Sathananthan J, Lauck S, Piazza N, Martucci G, Kim DH, Popma JJ, Asgar AW, Perrault LP, Lefèvre T, Labinaz M, Lamy A, Peterson MD, Arora RC, Noiseux N, Gagnéux P, **Webb JG**, Afilalo J. Habitual Physical Activity in Older Adults Undergoing TAVR: Insights From the FRAILTY-AVR Study. *JACC Cardiovasc Interv.* 2019 Apr 22;12(8):781-789. doi: 10.1016/j.jcin.2019.02.049. PubMed PMID: 31000014.
 63. Sathananthan J, Sellers SL, Fraser R, Dvir D, Hensey M, Murdoch DJ, Blanke P, Pibarot P, Toggweiler S, **Wood D, Leipsic J, Webb JG**. Impact of implant depth on hydrodynamic function with the ACURATE *neo* transcatheter heart valve following valve-in-valve transcatheter aortic valve replacement in Mitroflow bioprosthetic valves: an ex vivo bench study. *EuroIntervention.* 2019 May 20;15(1):78-87. doi: 10.4244/EIJ-D-18-00947. PubMed PMID: 30479308.
 64. Sathananthan J, **Webb JG**, Lauck SB, **Cairns J, Humphries KH**, Nazif T, Thourani VH, Cohen DJ, Leon MB, **Wood DA**; 3M TAVR Study Investigators. Impact of Local Anesthesia Only Versus Procedural Sedation Using the Vancouver Clinical Pathway for TAVR: Insights From the 3M TAVR Study. *JACC Cardiovasc Interv.* 2019 May 27;12(10):1000-1001. doi: 10.1016/j.jcin.2019.02.014. PubMed PMID: 31122345.
 65. Sau A, Al-Aidarous S, Howard J, Shalhoub J, Sohaib A, Shun-Shin M, Novak PG, Leather R, **Sterns LD**, Lane C, Kanagaratnam P, Peters NS, Francis DP, Sikkil MB. Optimum lesion set and predictors of outcome in persistent atrial fibrillation ablation: a meta-regression analysis. *Europace.* 2019 May 9. pii: euz108. doi: 10.1093/europace/euz108. [Epub ahead of print] PubMed PMID: 31071213.
 66. **Saw J**, Hassan S, Prakash R, Starovoytov A. Reply: Spontaneous Healing in Spontaneous Coronary Artery Dissection: An Angiographic Paradox? *JACC Cardiovasc Interv.* 2019 Jun 10;12(11):1088-1089. doi: 10.1016/j.jcin.2019.04.023. PubMed PMID: 31171285.
 67. **Saw J**, Nielsen-Kudsk JE, Bergmann M, Daniels MJ, Tzikas A, Reisman M, Rana BS. Antithrombotic Therapy and Device-Related Thrombosis Following Endovascular Left Atrial Appendage Closure. *JACC Cardiovasc Interv.* 2019 Jun 10;12(11):1067-1076. doi: 10.1016/j.jcin.2018.11.001. Epub 2019 May 15. Review. PubMed PMID: 31103535.
 68. **Saw J**, Starovoytov A, **Humphries K**, Sheth T, So D, Minhas K, Brass N, Lavoie A, Bishop H, Lavi S, Pearce C, Renner S, Madan M, Welsh RC, Lutchmedial S, Vijayaraghavan R, Aymong E, Har B, Ibrahim R, Gornik HL, Ganesh S, Buller C, Matteau A, Martucci G, Ko D, **Mancini GBJ**. Canadian spontaneous coronary artery dissection cohort study: in-hospital and 30-day outcomes. *Eur Heart J.* 2019 Apr 14;40(15):1188-1197. doi: 10.1093/eurheartj/ehz007. PubMed PMID: 30698711; PubMed Central PMCID: PMC6462308.
 69. **Saw J**. Is Antiplatelet Therapy After WATCHMAN Implantation Adequate? *JACC Cardiovasc Interv.* 2019 Jun 10;12(11):1064-1066. doi: 10.1016/j.jcin.2019.02.041. PubMed PMID: 31171283.
 70. Shafaattalab S, Lin E, Christidi E, Huang H, Nartiss Y, Garcia A, Lee J, Protze S, Keller G, Brunham L, Tibbits GF, **Laksman Z**. Ibrutinib Displays Atrial-Specific Toxicity in Human Stem Cell-Derived Cardiomyocytes. *Stem Cell Reports.* 2019

- May 14;12(5):996-1006. doi: 10.1016/j.stemcr.2019.03.011. Epub 2019 Apr 25. PubMed PMID: 31031187; PubMed Central PMCID: PMC6524928.
71. Shenasa M, **Krahn AD**. Antibiotic prophylaxis for cardiac implantable electronic devices: Is the jury out yet? *Pacing Clin Electrophysiol*. 2019 Jun 14. doi: 10.1111/pace.13743. [Epub ahead of print] PubMed PMID: 31199531.
 72. Shiono Y, Matsuo H, Kawasaki T, Amano T, Kitabata H, Kubo T, Morino Y, Yoda S, Sakamoto T, Ito H, Shite J, Otake H, Tanaka N, Terashima M, Kadota K, Patel MR, Nieman K, Rogers C, Nørgaard BL, Bax JJ, Raff GL, Chinnaiyan KM, Berman DS, Fairbairn TA, Hurwitz Koweek LM, **Leipsic J**, Akasaka T. Clinical Impact of Coronary Computed Tomography Angiography-Derived Fractional Flow Reserve on Japanese Population in the ADVANCE Registry. *Circ J*. 2019 May 24;83(6):1293-1301. doi: 10.1253/circj.CJ-18-1269. Epub 2019 Apr 18. PubMed PMID: 30996150.
 73. Stanger D, Kawano T, Malhi N, Grunau B, Tallon J, **Wong GC**, Christenson J, **Fordyce CB**. Door-to-Targeted Temperature Management Initiation Time and Outcomes in Out-of-Hospital Cardiac Arrest: Insights From the Continuous Chest Compressions Trial. *J Am Heart Assoc*. 2019 May 7;8(9):e012001. doi: 10.1161/JAHA.119.012001. PubMed PMID: 31055981; PubMed Central PMCID: PMC6512141.
 74. Stocker TJ, **Leipsic J**, Hadamitzky M, Chen MY, Rubinshtein R, Deseive S, Heckner M, Bax JJ, Kitagawa K, Marques H, Schmermund A, Silva C, Mahmarian J, Kang JW, Grove EL, Lesser J, Massberg S, Hausleiter J. Application of Low Tube Potentials in CCTA: Results From the PROTECTION VI Study. *JACC Cardiovasc Imaging*. 2019 Jun 7. pii: S1936-878X(19)30449-8. doi: 10.1016/j.jcmg.2019.03.030. [Epub ahead of print] PubMed PMID: 31202772.
 75. Taskin O, Rikhranj K Tan J, **Sedlak T**, Rowe TC, Bedaiwy MA. Link between Endometriosis, Atherosclerotic Cardiovascular Disease, and the Health of Women Midlife. *J Minim Invasive Gynecol*. 2019 Jul - Aug;26(5):781-784. doi: 10.1016/j.jmig.2019.02.022. Epub 2019 Apr 25. PMID: 31028947
 76. Thomas DM, McLaughlin PD, Nugent JP, Barrett SA, **Mayo JR**, Bilawich AM, **Wong GC**, Nicolaou S. Evaluation of the proximal coronary arteries in suspected pulmonary embolism: diagnostic images in 51% of patients using non-gated, dual-source CT pulmonary angiography. *Emerg Radiol*. 2019 Apr;26(2):189-194. doi: 10.1007/s10140-018-01661-0. Epub 2018 Dec 12. PubMed PMID: 30539378.
 77. Towbin JA, McKenna WJ, Abrams DJ, Ackerman MJ, Calkins H, Darrieux FCC, Daubert JP, de Chillou C, DePasquale EC, Desai MY, Estes NAM 3rd, Hua W, Indik JH, Ingles J, James CA, John RM, Judge DP, Keegan R, **Krahn AD**, Link MS, Marcus FI, McLeod CJ, Mestroni L, Priori SG, Saffitz JE, Sanatani S, Shimizu W, van Tintelen JP, Wilde AAM, Zareba W. 2019 HRS expert consensus statement on evaluation, risk stratification, and management of arrhythmogenic cardiomyopathy. *Heart Rhythm*. 2019 May 9. pii: S1547-5271(19)30438-2. doi: 10.1016/j.hrthm.2019.05.007. [Epub ahead of print] PubMed PMID: 31078652.
 78. van der Werf C, Lieve KV, Bos JM, Lane CM, Denjoy I, Roses-Noguer F, Aiba T, Wada Y, Ingles J, Leren IS, Rudic B, Schwartz PJ, Maltret A, Sacher F, Skinner JR, **Krahn AD**, Roston TM, Tfelt-Hansen J, Swan H, Robyns T, Ohno S, Roberts JD, van den Berg MP, Kammeraad JA, Probst V, Kannankeril PJ, Blom NA, Behr ER, Borggrefe M, Haugaa KH, Semsarian C, Horie M, Shimizu W, Till JA, Leenhardt A, Ackerman MJ, Wilde AA. Implantable cardioverter-defibrillators in previously

- undiagnosed patients with catecholaminergic polymorphic ventricular tachycardia resuscitated from sudden cardiac arrest. *Eur Heart J*. 2019 May 30. pii: ehz309. doi: 10.1093/eurheartj/ehz309. [Epub ahead of print] PubMed PMID: 31145795.
79. van Diemen PA, Driessen RS, Stuijtzand WJ, Raijmakers PG, Schumacher SP, Bom MJ, Everaars H, Min JK, **Leipsic JA**, Knuuti J, Underwood SR, van de Ven PM, van Rossum AC, Danad I, Knaapen P. Impact of scan quality on the diagnostic performance of CCTA, SPECT, and PET for diagnosing myocardial ischemia defined by fractional flow reserve. *J Cardiovasc Comput Tomogr*. 2019 Jun 12. pii: S1934-5925(19)30029-2. doi: 10.1016/j.jcct.2019.06.007. [Epub ahead of print] PubMed PMID: 31302028.
 80. van Diemen PA, Schumacher SP, Bom MJ, Driessen RS, Everaars H, Stuijtzand WJ, Raijmakers PG, van de Ven PM, Min JK, **Leipsic JA**, Knuuti J, Boellaard PR, **Taylor CA**, van Rossum AC, Danad I, Knaapen P. The association of coronary lumen volume to left ventricle mass ratio with myocardial blood flow and fractional flow reserve. *J Cardiovasc Comput Tomogr*. 2019 Jun 24. pii: S1934-5925(19)30267-9. doi: 10.1016/j.jcct.2019.06.016. [Epub ahead of print] PubMed PMID: 31302027.
 81. Vischer AS, Castelletti S, Syrris P, Bastiaenen R, Miles C, Akdis D, Denhaerynck K, Jacoby D, Saguner AM, **Krahn AD**, Behr ER, McKenna WJ, Pantazis A. Risk score for the exclusion of arrhythmic events in arrhythmogenic right ventricular cardiomyopathy at first presentation. *Int J Cardiol*. 2019 Sep 1;290:100-105. doi: 10.1016/j.ijcard.2019.04.090. Epub 2019 May 1. PubMed PMID: 31104822.
 82. Wang C, Bangdiwala SI, Rangarajan S, **Lear SA**, AlHabib KF, Mohan V, Teo K, Poirier P, Tse LA, Liu Z, Rosengren A, Kumar R, Lopez-Jaramillo P, Yusuf K, Monsef N, Krishnapillai V, Ismail N, Seron P, Dans AL, Kruger L, Yeates K, Leach L, Yusuf R, Orlandini A, Wolyniec M, Bahonar A, Mohan I, Khatib R, Temizhan A, Li W, Yusuf S. Association of estimated sleep duration and naps with mortality and cardiovascular events: a study of 116 632 people from 21 countries. *Eur Heart J*. 2019 May 21;40(20):1620-1629. doi: 10.1093/eurheartj/ehy695. PubMed PMID: 30517670; PubMed Central PMCID: PMC6528160.
 83. **Webb JG**, Murdoch DJ, Alu MC, Cheung A, Crowley A, Dvir D, Herrmann HC, Kodali SK, **Leipsic J**, Miller DC, Pibarot P, Suri RM, **Wood D**, Leon MB, Mack MJ. 3-Year Outcomes After Valve-in-Valve Transcatheter Aortic Valve Replacement for Degenerated Bioprostheses: The PARTNER 2 Registry. *J Am Coll Cardiol*. 2019 Jun 4;73(21):2647-2655. doi: 10.1016/j.jacc.2019.03.483. PubMed PMID: 31146808.
 84. **Webb JG**, Sathananthan J, **Wood DA**. Increasing awareness of the need to protect the coronary arteries in patients with failed surgical and transcatheter aortic valves. *EuroIntervention*. 2019 May 20;15(1):21-23. doi: 10.4244/EIJV15I1A3. PubMed PMID: 31105068.
 85. Yang H, Bouma BJ, Dimopoulos K, Khairy P, Ladouceur M, Niwa K, Greutmann M, Schwerzmann M, Egbe A, Scognamiglio G, Budts W, Veldtman G, Opatowsky AR, Broberg CS, Gumbiene L, Meijboom FJ, Rutz T, Post MC, Moe T, Lipczyńska M, Tsai SF, **Chakraborti S**, Tobler D, Davidson W, Morissens M, van Dijk A, Buber J, Bouchardy J, Skoglund K, Christersson C, Kronvall T, Konings TC, Alonso-Gonzalez R, Mizuno A, **Webb G**, Laukyte M, Sieswerda GTJ, Shafer K, Aboulhosn J, Mulder BJM. Non-vitamin K antagonist oral anticoagulants

(NOACs) for thromboembolic prevention, are they safe in congenital heart disease? Results of a worldwide study. *Int J Cardiol.* 2019 Jun 13. pii: S0167-5273(18)37020-7. doi: 10.1016/j.ijcard.2019.06.014. [Epub ahead of print] PubMed PMID: 31307847.

86. Yeung DF, **Saw J.** Multiple recurrences of spontaneous coronary artery dissection in a woman with fibromuscular dysplasia. *Catheter Cardiovasc Interv.* 2019 Apr 29. doi: 10.1002/ccd.28301. [Epub ahead of print] PubMed PMID: 31033181.

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