I selected Marco Perez and Mintu Turakhia to be highlighted in this newsletter. Over a decade as faculty in the Stanford Cardiovascular Medicine Division, Marco and Mintu have made remarkable accomplishments in our field and have established themselves as international leaders in both research and clinical medicine. Together they led the Apple Heart Study, a pioneering virtual study with over 400,000 enrolled participants reporting that wearable devices can detect heart irregularities and atrial fibrillation.

**Dr. Marco Perez** is an Associate Professor of Medicine at Stanford University and is a clinical cardiac electrophysiologist. He is director of the Inherited Cardiac Arrhythmia Clinic which he established 10 years ago where he cares for families with rare inherited arrhythmic conditions such as Long QT and Brugada syndromes and other arrhythmic diseases in young patients and in athletes. His research goal is to better understand the fundamental causes of cardiovascular disease through the study of genetics and epidemiology.

He was awarded NIH R01 funding to run WHISH-STAR, a large randomized study of the effects of exercise intervention on atrial fibrillation. This nation-wide study in older women uses electrocardiographic patch monitors to screen for previously undiagnosed arrhythmic disease. He is also co-Principal Investigator for the Apple Heart Study, which enrolled over 400,000 participants in a virtual study using the Apple Watch to identify irregular pulse consistent with atrial fibrillation. He also receives funding from the Stanford SPARK program and the Weston Havens foundation to develop a small molecule agonist of HCRTR2, a novel therapeutic target he and colleagues identified using systems-genomic tools, for the treatment of heart failure.

Dr. Perez is excited about exploring the expanding role of genetic testing in the clinical setting, the growing use of wearable technology to screen for cardiovascular disease and the use of virtual study designs to conduct large-scale clinical studies.

**Dr. Mintu Turakhia** is an Associate Professor of Medicine. He is director of the electrophysiology program at the VA Palo Alto Health Care System. After training at Brigham and Women’s Hospital and UCSF, he came to Stanford in 2008 and developed a multidisciplinary program in heart rhythm research that applies biostatistical, health economic, and data science approaches to examine quality, outcomes, and risk of heart rhythm disorders such as atrial fibrillation in very large datasets that his group has assembled.
To further extend this work into wearables and technology-based clinical trials, Mintu co-founded the Stanford Center for Digital Health and has served as its executive director since 2017. The center leads technology research, education, and strategic partnerships with pharmaceutical, device, and technology companies. Mintu has served as PI of several multi-center arrhythmia technology trials, including SmartADHERE and AMBULATE, and he is co-PI of the Apple Heart Study with Dr. Marco Perez. Mintu has authored over 200 manuscripts and other works including 15 national or international guidelines. He is an elected member of the American Society of Clinical Investigation and is an Associate Editor of JAMA Cardiology.

Mintu enjoys skiing, golfing, the data science of sports, and crafting obscure cocktails.

Appointments and Promotions

**Faculty**

**Reappointments**

Sanjiv Narayan MD was reappointed to Professor (Cardiovascular Medicine) on May 1, 2019.

Juyong (Brian) Kim MD was reappointed to Instructor (Cardiovascular Medicine) on July 1, 2019.

**Staff**

**New appointments**

Marina Romero, Administrative Associate, is supporting the General Cardiology and VA cardiology group. Marina started on April 29th.

Young Kim, Software Developer, is working with Drs. Euan Ashley and Matthew Wheeler on the MoTrPAC project. Young started on June 3rd.

Saira Purewal, Assistant Clinical Research Coordinator, is working with Drs Khush and Narayan on various heart transplant and electrophysiology clinical trials. Saira started June 10th.
New Sponsored Awards

Grants and Awards

Federal Grants and Subcontracts

Joshua Knowles – American Diabetes Association, Inc. Grant
“Targeting inflammation and alloimmunity in heart transplant recipients with Tocilizumab”

January 1, 2019 – December 31, 2019

Koen Nieman – National Institutes of Health R01
“Comprehensive CT Guided Coronary Artery Bypass Graft Surgery”
February 15, 2019 – January 31, 2024

Non-federal Grants and Contracts

Colleen Caleshu – Jane Engelberg Memorial Foundation Fellowship
“nmA randomized controlled trial of meditation to improve genetic counselor and genetic counseling student professional well-being”

January 1, 2019 – December 31, 2020

David Maron – Astra Zeneca Clinical Trial
“A Multinational, Randomized, Double-Blind, Placebo-Controlled Trial to Evaluate the Effect of Ticagrelor 90 mg twice daily on the Incidence of Cardiovascular Death, Myocardial Infarction or Stroke in Patients with Type 2 Diabetes Mellitus” [THEMIS - effect of Ticagrelor on Health outcomes in diabEtes Mellitus patients Intervention Study]

May 16, 2019 – May 31, 2020

Cardiology Fellowship Program

Congratulations to the 2019 graduating fellows!

General Cardiology

Lee L. Chang, MD will be continuing at Stanford as a fellow in the Advanced Heart Failure Transplant Cardiology program.
Petra Mamic, MD will be continuing at Stanford as a research fellow with Dr. Michael Snyder in Genetics.

Alexander C. Perino, MD will be continuing at Stanford as a fellow in the Electrophysiology program.

Alexander Tarlochan Singh Sandhu, MD will be continuing at Stanford as a fellow in the Advanced Heart Failure Transplant Cardiology program.

Alberta Yen, MD will be going to Kaiser Permanente in Santa Clara to build their structural imaging and cardiac MRI programs.

Advanced Heart Failure Transplant Cardiology

Kevin Michael Alexander, MD will be continuing at Stanford as Instructor of Medicine (Cardiovascular Medicine).

Peter Czobor, MD will be going to Kaiser SF and Santa Clara to work part-time as a general and heart failure cardiologist while his wife, Karen Schultz finishes up the Adult Congenital Heart Disease fellowship program.

Maxime Tremblay-Gravel, MD will be continuing at Stanford as a research and clinical fellow in the echo/imaging fellowship program.

Adult Congenital Heart Disease

Melissa Morello, MD is headed to the University of Louisville as the Assistant Medical Director of the Adult Congenital Heart Disease Program as well as Assistant Professor of Pediatrics and Medicine (Pediatric Cardiology).

Echo / Imaging

Cindy Wang, MD will be a general cardiologist with the Advanced Cardiovascular Specialists group at El Camino Hospital. She will be specializing in multi-modality cardiac imaging and interventional echocardiography.

Electrophysiology

Jaskanwal (Sonny) Bisla, MD is headed to Phoenix, Arizona to a cardiovascular private practice.

Yan (Julie) Dong, MD is interviewing for academic positions.

Interventional Cardiology

Guson Kang, MD is headed to Henry Ford Health Care System in Detroit, Michigan to complete a structural interventions fellowship.

Yuhei Kobayashi, MD is interviewing for academic interventional positions.

Graduation Awards

Alan Yeung and Sharon Hunt Award for Outstanding Clinical Fellow: Jeffrey Lin
Reaven award for basic science: Paul Cheng
Alderman award for clinical research: Alex Sandhu and Lee Chang
Hancock teaching award: David Liang
Congratulations to David Ouyang for receiving a Stanford Artificial Intelligence in Medicine and Imaging (AIMI) Center Seed Grant on “Computer Vision Prediction of Cardiovascular Outcomes through Echo”.

Congratulations to Han Zhu for receiving a National Heart, Lung and Blood Institute F32 Ruth L. Kirschstein National Research Service Award on “Identification of Causal Antigens in Immune Checkpoint Inhibitor-Induced Myocarditis”.

Han was also selected to serve on the American Heart Association Cardio-Oncology Council as a FIT member!

Publications

Interventions to Reduce Ethnic and Racial Disparities in Dyslipidemia Management.
Chang AY, Abou-Arraj NE, Rodriguez F.

Urinary tract infection after catheter ablation of atrial fibrillation.

Site Variation and Outcomes for Antithrombotic Therapy in AF Patients after PCI: Findings from the Veterans Health Administration.
Olivier CB, Fan J, Askari M, Mahaffey KW, Heidenreich PA, Perino AC, Leef GC, Ho PM, Harrington RA, Turakhia MP.

Finding missed cases of familial hypercholesterolemia in health systems using machine learning.

Presentations

Jeffrey Lin presented a moderated ePoster at the Heart Rhythm Society meeting in May on "Prevalence of Silent Atrial Fibrillation in the Women's Health Initiative Strong and Healthy Silent Atrial Fibrillation Recording Study (WHISH STAR)"
Session: Epidemiology of AF Revisited

David Ouyang presented at the American Society of Echocardiography meeting as the Arthur Weyman Young Investigator Award Competition Finalist

Han Zhu presented at the Society of Cardiovascular Computed Tomography (SCCT) 2019 Annual meeting on "Computational Fluid Dynamics of CABG Patients: CTA-derived Hemodynamic and Anatomic Predictors of Vein Graft Failure".
Welcome the incoming Cardiology Fellows!

**General Cardiology**
Caitlin Bell, MD – Stanford
Aly Elezaby, MD, PhD – Stanford
Maggie Ning, MD – Stanford
Pablo Sanchez, MD – Stanford
Jimmy Tooley, MD – Stanford
Chad Weldy, MD, PhD – Stanford

**Advanced Heart Failure Transplant Cardiology**
Hershey Avula, MD – Kaiser
Lee Chang, MD – Stanford
Alex Sandhu, MD – Stanford

**Adult Congenital Heart Disease**
Sumeet Vaikunth, MD – Stanford

**Echo / Imaging**
Mirela Tuzovic, MD – UCLA

**Electrophysiology**
Ridhima Kapoor, MD – Med College of Wisconsin
Jeffrey Lin, MD – Stanford

**Interventional Cardiology**
Eric Chan, MD – Queen Mary Hospital
Ryan Markham, MD – Prince Charles Hospital

**Our Team in the News**
A Database of a Million Veterans
Dr. Phil Tsao are helping collect samples and medical data from a million American veterans to create an enormous database of medical information.

Even athletes may have high blood pressure, possibly
Recently promoted Assistant Clinical Professor, Dr. Kegan Moneghetti says even athletes can have high blood pressure.

Gene networks reveal transition from healthy to failing heart
Dr. Euan Ashley and team have mapped out a network of gene activity before and after heart failure to better understand how heart health declines.

Big data, from computer models to clinic, is focus of conference
Multiple faculty from Cardiovascular Medicine attended and presented at the annual Big Data in Precision Health Conference including Drs. Euan Ashley, Marco Perez, and Mintu Turakhia.

E-cigarette use, flavorings may increase heart disease risk, study finds
Dr. Joseph Wu and team study E-cigarette use, flavorings may increase heart disease risk.

Vascular Discovery: From Genes to Medicine
Congratulations to Dr. Robert Wirka who recently won the ATVB Irvine H. Page Young Investigator Research Award at the American Heart Association meeting.
Lab-grown heart cells reveal secrets of “kissing bug” disease
Dr. Joseph Wu’s lab-grown heart cells reveal secrets of “kissing bug” disease.

Upcoming Events and Conferences

Register TODAY!
Sunday, September 8, 2019
7:30am – 11:30am

CV Med Quarterly Socials – All socials begin at 4:30pm in the Falk Library (or outside patio when weather permits). 2019 Socials are on Thursdays. The next quarterly social will take place in September or October. Date and location: TBD.

Featured Cardiovascular Medicine Conferences

Cardiology Grand Rounds calendar
Weekly CGR’s are on Thursdays at 8am in the Falk Library.

- Electrophysiology in the West 2019: The Latest Advances in Arrhythmia Care
  Course Director: Paul Wang MD
  Stanford University
  Li Ka Shing Center for Learning and Knowledge
  September 13, 2019

Additional Cardiovascular Medicine CME information

Complete list of Stanford CME courses
Monthly:

- Frontiers in Cardiovascular Science
  Tuesdays from 12:30 – 1:20pm
  Stanford University Li Ka Shing Center
  291 Campus Drive, Stanford, CA

Additional Conferences and Meetings

July 2019

- Stanford University
  27th Annual Pediatric Update and Pre-Conference: What’s New in Allergy and Pulmonology
2019
July 18-20, 2019
The Frances C. Arrillaga Alumni Center, Stanford, CA
Pediatric Conference

- American Heart Association
  Basic Cardiovascular Sciences Scientific Sessions
  July 29–August 1, 2019
  Westin Boston Waterfront | Boston, MA
  AHA

August 2019

- Cardiology Update: The Heart of the Matter 2019
  August 1, 2019 to August 4, 2019
  Sedona, AZ
  Mayo Clinic

- American College of Cardiology
  ACC/SCAI Premier Interventional Cardiology Overview and Board Preparatory Course
  August 8, 2019 - August 11, 2019
  ACC

September 2019

- American Heart Association
  Hypertension 2019 Scientific Sessions
  September 5–8, 2019
  New Orleans Marriott | New Orleans, Louisiana
  AHA

- American College of Cardiology
  2019 Cardiovascular Service Lines 101 Webinar
  September 12, 2019 12:00 PM - 1:00 PM
  ACC

October 2019

- American College of Cardiology
  Core Curriculum for the Cardiovascular Clinician
  October 2- 5, 2019
  Washington, DC
  ACC

- American College of Cardiology
  Heart Valve Summit: Medical, Surgical and Interventional Decision Making
  October 3- 5, 2019
  Chicago, IL
  ACC
If you are thinking about applying to a grant, email Crystal or Pete to learn more about the Division of Cardiovascular Medicine’s research development and proposal writing resources.

## Upcoming Funding Opportunities

- **AHA grants**
- **Additional Funding:** Cardiovascular Disease Funding Opportunities, Internal Funding Opportunities, Postdocs and Clinical Fellows, Graduate Student
- **RMG Funding Information Resource webpage**
- **NIH, AHRQ and NIOSH K Career Development Award Funding Opportunities and Computer Lab Training Sessions:**
  - RMG Index of NIH K award program announcements and other resources

### Continuous Submissions

- **Intermountain-Stanford Collaboration Grant**
  - Request for Letters of Intent for Travel Grants
  - Letters of intent may be submitted at any time. Applicants will be notified within 21 days of submission.
  - Award Amount: Reimburse actual costs

### Cardiovascular Medicine Training Grants

- **Cardiovascular Imaging Postdoctoral Fellowship Training at Stanford**
  - CV Imaging
- **Training in Myocardial Biology at Stanford (TIMBS)**
  - TIMBS
- **Mechanisms and Innovations in Cardiovascular Disease T32 Training Grant**
  - T32

### July 2019

- **Dr. Jeffrey Thomas Stroke Shield Foundation**
  - Blood Pressure Management Program: Community-research partnerships to reduce stroke rate and hypertension in underserved communities in Alameda County, CA New $210,000 funding opportunity from a local foundation for Stanford faculty with PI eligibility and CE faculty
  - Letter of intent (required) deadline: July
  - Full proposal (by invitation only) deadline: Sept.
  - Guidelines
  - LOI instructions
Included in this newsletter are cardiovascular medicine faculty publications for the months of January – April. Publications are in date order from newest to oldest.

**JULY**

**Trends in overall, cardiovascular and cancer-related mortality among individuals with diabetes reported on death certificates in the United States between 2007 and 2017.**


**Surveillance of Congenital Heart Defects among Adolescents at Three U.S. Sites.**


**Propagation velocity at atrial fibrillation sources: Go with the flow.**


**Generation of Endothelial Cells From Human Pluripotent Stem Cells.**


**JUNE**

**The efficacy and safety of cangrelor in single vessel vs multi vessel percutaneous coronary intervention: Insights from CHAMPION PHOENIX.**


**Identification of rare-disease genes using blood transcriptome sequencing and large control cohorts.**


**Pathologic gene network rewiring implicates PPP1R3A as a central regulator in pressure overload heart failure.**

Modelling diastolic dysfunction in induced pluripotent stem cell-derived cardiomyocytes from hypertrophic cardiomyopathy patients.

A Combination of Itraconazole and Amiodarone Is Highly Effective against Trypanosoma cruzi Infection of Human Stem Cell-Derived Cardiomyocytes.

Psychological Distress Among Female Cardiac Patients Presenting to a Women's Heart Health Clinic.
Edwards KS, Hekler AC, Baum J, Nejedly M, Tsai S, Khandelwal A, Naderi S, Hoover V, Tremmel JA.

Incidence and Cost of Major Adverse Cardiovascular Events and Major Adverse Limb Events in Patients With Chronic Coronary Disease or Peripheral Artery Disease.
Berger A, Simpson A, Bhagnani T, Leeper NJ, Murphy B, Nordstrom B, Ting W, Zhao Q, Berger JS.

Defining genotype-phenotype relationships in patients with hypertrophic cardiomyopathy using cardiovascular magnetic resonance imaging.
Miller RJH, Heidary S, Pavlovic A, Schlachter A, Dash R, Fleischmann D, Ashley EA, Wheeler MT, Yang PC.

Canagliflozin and Renal Outcomes in Type 2 Diabetes and Nephropathy.

EXPRESS: Myocardial Bridge - An Unrecognized Cause of Chest Pain in Pulmonary Arterial Hypertension.
Rajmohan D, Sung YK, Kudelko K, Perez VAJ, Haddad F, Tremmel J, Schnittger I, Zamanian RT, Speikerkoetter EF.

Using Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes as a Model to Study Trypanosoma cruzi Infection.

Blood Pressure and Incident Atrial Fibrillation in Older Patients Initiating Hemodialysis.
An in Vivo miRNA Delivery System for Restoring Infarcted Myocardium.

Urinary tract infection after catheter ablation of atrial fibrillation.

Modeling Cardiovascular Risks of E-Cigarettes With Human-Induced Pluripotent Stem Cell-Derived Endothelial Cells.

Less Risky Immunosuppression in Heart Transplantation?
Hunt SA.

Clonal Smooth Muscle Cell Expansion, Autophagy, and Vascular Integrity in Aortic Aneurysm Disease.
Wang Y, Nanda V, Leeper NJ.

Stroke in Patients With Peripheral Artery Disease.

Cardiometabolic Proteins Associated with Metabolic Syndrome.
Lind L, Elmståhl S, Ingelsson E.

A Patient with Sjogren's Syndrome and Subsequent Diagnosis of Inclusion Body Myositis and Light-Chain Amyloidosis.

Extracutaneous manifestations in phacomatosis cesioflammea and cesiomarmorata: Case series and literature review.

Comparison of QT Interval Measurement Methods and Correction Formulas in Atrial Fibrillation.
Tooley J, Ouyang D, Hadley D, Turakhia M, Wang P, Ashley E, Froelicher V, Perez M.

Effects of canagliflozin on amputation risk in type 2 diabetes: the CANVAS Program.
Matthews DR, Li Q, Perkovic V, Mahaffey KW, de Zeeuw D, Fulcher G, Desai M, Hiatt WR, Nehler M, Fabbrini E, Kavalam M, Lee M, Neal B.
Rapid Genome Sequencing in the Critically Ill.
Buchan JG, White S, Joshi R, Ashley EA.

The role of epigenetic aging in education and racial/ethnic mortality disparities among older U.S. Women.
Liu Z, Chen BH, Assimes TL, Ferrucci L, Horvath S, Levine ME.

Accuracy of Administrative Coding to Identify Reduced and Preserved Left Ventricular Ejection Fraction.
Heidenreich PA, Natarajan S, Bahrami H.

Infectious complications after heart transplantation in patients screened with gene expression profiling.
Moayedi Y, Gomez CA, Fan CPS, Miller RJH, Bunce PE, Tremblay-Gravel M, Foroutan F, Manlhiot C, Yee J, Shullo MA, Khush KK, Ross HJ, Montoya JG, Teuteberg JJ.

Comparison between instantaneous wave-free ratio versus morphometric assessments by intracoronary imaging.

Cancer therapy-induced cardiomyopathy: can human induced pluripotent stem cell modelling help prevent it?
Stack JP, Moslehi J, Sayed N, Wu JC.

MAY

The metabolites urobilin and sphingomyelin (30:1) are associated with incident heart failure in the general population.

Athletic Remodeling in Female College Athletes: The "Morganroth Hypothesis" Revisited.

Single cell expression analysis reveals anatomical and cell cycle-dependent transcriptional shifts during heart development.

Blood pressure in athletic preparticipation evaluation and the implication for cardiac remodelling.
Hedman K, Moneghetti KJ, Christie JW, Bagherzadeh SP, Amsallem M, Ashley E, Froelicher V, Haddad F.
Effects of Canagliflozin on Heart Failure Outcomes Associated With Preserved and Reduced Ejection Fraction in Type 2 Diabetes Mellitus.
Figtree GA, Rådholm K, Barrett TD, Perkovic V, Mahaffey KW, de Zeeuw D, Fulcher G, Matthews DR, Shaw W, Neal B.

Practice Variation in Anticoagulation Prescription and Outcomes After Device-Detected Atrial Fibrillation.
Circulation. 2019 May 28;139(22):2502-2512. doi: 10.1161/CIRCULATIONAHA.118.038988.

The prognostic importance of silent ischemia.
Fearon WF.

Adrenomedullin and endothelin-1: Promising biomarkers of endothelial function, but not ready for prime time.
Parikh RV, Fearon WF.

Effects of alirocumab on types of myocardial infarction: insights from the ODYSSEY OUTCOMES trial.

Effect of Alirocumab on Mortality After Acute Coronary Syndromes: An Analysis of the ODYSSEY OUTCOMES Randomized Clinical Trial.
Circulation. 2019 May 23. doi: 10.1161/CIRCULATIONAHA.118.038840.

The Comparative Effect of Roux-en-Y Gastric Bypass and Sleeve Gastrectomy on 10-Year and Lifetime Atherosclerotic Cardiovascular Disease Risk.
Raygor V, Garcia L, Maron DJ, Morton JM.

Human-Induced Pluripotent Stem Cell Model of Trastuzumab-Induced Cardiac Dysfunction in Patients With Breast Cancer.

Improving risk stratification in heart failure with preserved ejection fraction by combining two validated risk scores.
RRAD mutation causes electrical and cytoskeletal defects in cardiomyocytes derived from a familial case of Brugada syndrome.

Prehospital Phase of Acute Stroke Care: Guideline and Policy Considerations as Science and Evidence Rapidly Evolve.
Harrington RA.

Proteasome-Dependent Regulation of Distinct Metabolic States During Long-Term Culture of Human iPSC-Derived Cardiomyocytes.

Optimal balloon positioning for the proximal optimization technique? An experimental bench study.

Therapeutic perspective on vascular cognitive impairment.
Toyama K, Spin JM, Mogi M, Tsao PS.

Author Correction: Genome-wide association study of alcohol consumption and use disorder in 274,424 individuals from multiple populations.

Blood Pressure Control and Cardiovascular Outcomes in Patients With Atrial Fibrillation (From the ORBIT-AF Registry).

Targeted Long-Read RNA Sequencing Demonstrates Transcriptional Diversity Driven by Splice-Site Variation in MYBPC3.
Dainis A, Tseng E, Clark TA, Hon T, Wheeler M, Ashley E.

Identifying the Transcriptome Signatures of Calcium Channel Blockers in Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes.
Controlled isoflurane anesthesia exposure is required for reliable behavioral testing in murine surgical models.
Toyama K, Spin JM, Abe Y, Suzuki Y, Deng AC, Wagenhäuser MU, Yoshino T, Mulorz J, Liu S, Tsao PS, Mogi M.

Stanford Cardiovascular Institute.
Wu JC, Woo YJ, Mayerle M, Harrington RA, Quertermous T.

The West coast regional safety pharmacology society meeting update: Filling translational gaps in safety assessment.

Treatment of volumetric muscle loss in mice using nanofibrillar scaffolds enhances vascular organization and integration.
Nakayama KH, Quarta M, Paine P, Alcazar C, Karakikes I, Garcia V, Abilez OJ, Calvo NS, Simmons CS, Rando TA, Huang NF.

Interventions to Reduce Ethnic and Racial Disparities in Dyslipidemia Management.
Chang AY, Abou-Arraj NE, Rodriguez F.

Maternal Comorbidities and Complications of Delivery in Pregnant Women With Congenital Heart Disease.
Schlichting LE, Insaf TZ, Zaidi AN, Lui GK, Van Zutphen AR.

Comparison of Patient-Reported Care Satisfaction, Quality of Warfarin Therapy, and Outcomes of Atrial Fibrillation: Findings From the ORBIT - AF Registry.
J Am Heart Assoc. 2019 May 7;8(9):e011205. doi: 10.1161/JAHA.118.011205.

A paradoxical relationship between hemoglobin A1C and in-hospital mortality in intracerebral hemorrhage patients.

Semiautomated Characterization of Carotid Artery Plaque Features From Computed Tomography Angiography to Predict Atherosclerotic Cardiovascular Disease Risk Score.

Editorial: High density mapping of atrial fibrillation sources.
Rogers AJ, Bhatia NK, Brodt C, Narayan SM.

TCF21 and AP-1 interact through epigenetic modifications to regulate coronary artery disease gene expression.
A Human iPSC Double-Reporter System Enables Purification of Cardiac Lineage Subpopulations with Distinct Function and Drug Response Profiles.

A longitudinal big data approach for precision health.

Abundant associations with gene expression complicate GWAS follow-up.
Liu B, Gloudemans MJ, Rao AS, Ingelsson E, Montgomery SB.

Comparison of Rates of Bleeding and Vascular Complications Before, During, and After Trial Enrollment in the SAFE-PCI Trial for Women.

An orange calcium-modulated bioluminescent indicator for non-invasive activity imaging.

Clinical outcomes after direct and indirect surgical venous thrombectomy for inferior vena cava thrombosis.

Identification of 22 novel loci associated with urinary biomarkers of albumin, sodium, and potassium excretion.
Zanetti D, Rao A, Gustafsson S, Assimes TL, Montgomery SB, Ingelsson E.

No evidence of a causal association of type 2 diabetes and glucose metabolism with atrial fibrillation.

Rationale, design and baseline characteristics of the effect of ticagrelor on health outcomes in diabetes mellitus patients Intervention study.

Smooth Muscle Cells Contribute the Majority of Foam Cells in ApoE (Apolipoprotein E)-Deficient Mouse Atherosclerosis.
Association of frailty and cognitive impairment with benefits of oral anticoagulation in patients with atrial fibrillation.

Extended cardiac ambulatory rhythm monitoring in adults with congenital heart disease: Arrhythmia detection and impact of extended monitoring.

Echocardiographic Evaluation of Patients Undergoing Transcatheter Tricuspid Valve-In-Valve Replacement.
Tompkins R, Kelle AM, Cabalka AK, Lui GK, Aboulhosn J, Dvir D, McElhinney DB; VIVID Registry.

CANDI: an R package and Shiny app for annotating radiographs and evaluating computer-aided diagnosis.

Accuracy of non-invasive stress testing in women and men with angina in the absence of obstructive coronary artery disease.
Pargaonkar VS, Kobayashi Y, Kimura T, Schnittger I, Chow EKH, Froelicher VF, Rogers IS, Lee DP, Fearon WF, Yeung AC, Stefanick ML, Tremmel JA.

A novel pacing maneuver to verify the postpacing interval minus the tachycardia cycle length while adjusting for decremental conduction: Using "dual-chamber entrainment" for improved supraventricular tachycardia discrimination.
Kaiser DW, Nasir JM, Liem LB, Brodt C, Motonaga KS, Ceresnak SR, Turakhia MP, Dubin AM.

Index of Microcirculatory Resistance and Infarct Size.
Fearon WF, Dash R.

APRIL

Effect of Tube Voltage on Diagnostic Performance of Fractional Flow Reserve Derived From Coronary CT Angiography With Machine Learning: Results From the MACHINE Registry.

Lifestyle, Glycosylated Hemoglobin A1c, and Survival Among Patients With Stable Ischemic Heart Disease and Diabetes.
Mancini GBJ, Maron DJ, Hartigan PM, Spertus JA, Kostuk WJ, Berman DS, Teo KK, Weintraub WS, Boden WE; COURAGE Trial Research Group.
Cardiac function response to stenting in atherosclerotic renal artery disease with and without heart failure: results from the Carmel study.


Author Correction: Novel mutations in PIEZO1 cause an autosomal recessive generalized lymphatic dysplasia with non-immune hydrops fetalis.

Treatment of atrial fibrillation with concomitant coronary or peripheral artery disease: Results from the outcomes registry for better informed treatment of atrial fibrillation II.

Impact of iodine concentration and iodine delivery rate on contrast enhancement in coronary CT angiography: a randomized multicenter trial (CT-CON).

Body composition and atrial fibrillation: a Mendelian randomization study.
Tikkanen E, Gustafsson S, Knowles JW, Perez M, Burgess S, Ingelsson E.

The Impact of Prescribed Fire versus Wildfire on the Immune and Cardiovascular Systems of Children.

Comparison of Ideal Cardiovascular Health Attainment and Acculturation among Asian Americans and Latinos.
Rodriguez F, Echeverría SE, Pentakota SR, Amadi C, Hastings KG, Palaniappan LP.

LIMPRINT: Elucidating the Global Problem of Lymphedema.
Rockson SG.
Substantial Cardiovascular Morbidity in Adults With Lower-Complexity Congenital Heart Disease.

Personalized medicine in cardio-oncology: the role of induced pluripotent stem cell.
Sayed N, Ameen M, Wu JC.

Myocardial viability of the peri-infarct region measured by T1 mapping post manganese-enhanced MRI correlates with LV dysfunction.

Physical activity, sleep and cardiovascular health data for 50,000 individuals from the MyHeart Counts Study.

A toolkit for genetics providers in follow-up of patients with non-diagnostic exome sequencing.

Finding missed cases of familial hypercholesterolemia in health systems using machine learning
Juan M. Banda, Ashish Sarraju, Fahim Abbasi, Justin Parizo, Mitchel Pariani, Hannah Ison, Elinor Briskin, Hannah Wand, Sebastien Dubois, Kenneth Jung, Seth A. Myers, Daniel J. Rader, Joseph B. Leader, Michael F. Murray, Kelly D. Myers, Katherine Wilemon, Nigam H. Shah and Joshua W. Knowles.

Guo H, Tian L, Zhang JZ, Kitani T, Paik DT, Lee WH, Wu JC.

Response by Itoga et al to Letter Regarding Article, "Association of Blood Pressure Measurements With Peripheral Arterial Disease Events".
Itoga NK, Tawfik DS, Leeper NJ, Chang TI.

New CENTERA Transcatheter Aortic Valve: Best of the Balloon-Expandable and Self-Expanding Valve Worlds?
Yeung AC.

Scheinker D, Valencia A, Rodriguez F.
Developing a genomics rotation: Practical training around variant interpretation for genetic counseling students.

Stars in the Night Sky: iPSC-Cardiomyocytes Return the Patient Context to Drug Screening.
Hnatiuk A, Mercola M.

Outcomes with ambulatory advanced heart failure from the Medical Arm of Mechanically Assisted Circulatory Support (MedaMACS) Registry.

A toolkit for genetics providers in follow-up of patients with non-diagnostic exome sequencing.

Impact of Hemodynamic Ramp Test-Guided HVAD Speed and Medication Adjustments on Clinical Outcomes.

Years of Potential Life Lost Because of Cardiovascular Disease in Asian-American Subgroups, 2003-2012.

Genome-wide association study of alcohol consumption and use disorder in 274,424 individuals from multiple populations.

An orange calcium-modulated bioluminescent indicator for non-invasive activity imaging.

Oral anticoagulation among atrial fibrillation patients with anaemia: an observational cohort study.

Opportunities and challenges for transcriptome-wide association studies.

Serial Cardiac FDG-PET for the Diagnosis and Therapeutic Guidance of Patients With Cardiac Sarcoidosis.

Nanoparticle Therapy for Vascular Diseases.

Parvovirus B19-induced severe anemia in heart transplant recipients: Case report and review of the literature.

Extended-duration betrixaban versus shorter-duration enoxaparin for venous thromboembolism prophylaxis in critically ill medical patients: an APEX trial substudy.

Developing a genomics rotation: Practical training around variant interpretation for genetic counseling students.

Interpreting Neurologic Outcomes in a Changing Trial Design Landscape: An Analysis of HeartWare Left Ventricular Assist Device Using a Hybrid Intention to Treat Population.

Predictability in complex atrial arrhythmias: The N/N-1 algorithm to guide ablation of atrial tachycardias.

Repair of Untreated Older Patients With Tetralogy of Fallot With Major Aortopulmonary Collaterals.

An Automated Algorithm to Quantify Collagen Distribution in Aortic Wall.

Efficacy and safety of rivaroxaban vs. warfarin in patients with non-valvular atrial fibrillation and a history of cancer: observations from ROCKET AF.
Evaluation of atrial septal defects with 4D flow MRI-multilevel and inter-reader reproducibility for quantification of shunt severity.
Chelu RG, Horowitz M, Sucha D, Kardys I, Ingremeau D, Vasanawala S, Nieman K, Paul JF, Hsiao A.

Combination of Mean Platelet Volume and Neutrophil to Lymphocyte Ratio Predicts Long-Term Major Adverse Cardiovascular Events After Percutaneous Coronary Intervention.
Choi DH, Kobayashi Y, Nishi T, Kim HK, Ki YJ, Kim SS, Park KH, Song H, Fearon WF.